

## D.4 Biological Resources – Vegetation

This section describes the Vegetation resources in the affected area, identifies and analyzes potential environmental impacts of the Proposed Project and alternatives, and recommends measures to reduce or avoid adverse impacts of project construction and operation. The affected environment for Biological Resources – Vegetation is described in Section D.4.1; the applicable regulations and standards are summarized in Section D.4.2. Sections D.4.3 through D.4.5 describe the impacts and recommended mitigation for the Proposed Project and the alternatives. Section D.4.6 presents the mitigation measures and mitigation monitoring requirements.

This section represents the most current available information. Much of the information has been derived from the *Biological Resources Technical Report: West of Devers Upgrade Project*, prepared by LSA (2013b). Content in the *Biological Resources Technical Report* is based on all available data including reports, books, manuals, and extensive new field data specific to the Proposed Project. In addition, this section incorporates the focused survey reports and other supporting documentation provided with the Appendix F of the Proponent's Environmental Assessment (PEA; SCE, 2013) and the findings of Aspen biologists during independent site reviews and consultations with resource agency staff and other experts.

### D.4.1 Environmental Setting / Affected Environment

This section summarizes vegetation communities and special-status plant species of the region in Section D.4.1.1 and describes specific baseline conditions for each segment of the proposed right-of-way (ROW; see Figure B-1) in Section D.4.1.2.

#### D.4.1.1 Regional Setting and Approach to Data Collection

##### *Data Collection Methodology*

Throughout this section, the “project area” refers to all areas that may be directly affected by the Proposed Project, including the ROW and all off-site work areas, access routes, and telecommunications routes. The *Biological Resources Technical Report* (LSA, 2013b) summarizes field surveys completed during 2012 and 2013. It defines a Proposed Project study area for the assessment of biological resources, as the locations where project-related work may be performed, plus a surrounding survey buffer area. In general, the maximum survey buffer extends 500 feet beyond the ROW. Survey buffers vary as appropriate for particular species or resources (LSA, 2013b), but were typically either 100 or 500 feet. The biological resource surveys in 2013 covered additional disturbance areas for external project elements that extended beyond the ROW and 2012 survey buffer areas (i.e., 66 kV subtransmission lines, 12 kV distribution lines, telecommunication, access roads, and staging yards). Figures B-1 through B-7 (in Section B) show the Proposed Project area; a 500-foot buffer around project components was surveyed in 2012 and 2013.

##### *Regional Setting*

The West of Devers ROW extends for more than 45 miles, generally parallel to the I-10 corridor for the majority of its length (Figure B-1). From west to east, it crosses the *San Bernardino South, Redlands, Sunnymead, El Casco, Beaumont, Cabazon, White Water, and Desert Hot Springs, California* 7.5-minute United States Geological Survey (USGS) quadrangles. From west to east, it passes through the Cities of Grand Terrace, Colton, Loma Linda, Redlands, San Bernardino, Yucaipa, Calimesa, Beaumont, Banning, and Palm Springs, and unincorporated areas of Riverside and San Bernardino Counties. The ROW crosses

privately owned lands, the Morongo Indian reservation, and public lands managed by the Bureau of Land Management (BLM). The elevation ranges from approximately 1,000 to 3,000 feet above mean sea level (amsl).

The route traverses several geographical and ecological zones. It traverses the San Timoteo Badlands (Badlands), spans San Timoteo Creek, the San Gorgonio River, and the Whitewater River, and runs through the San Gorgonio Pass into the western Sonoran Desert. Collectively, these areas contain a diverse flora that includes many rare, threatened, and endangered plants, and rare vegetation communities. Most of the ROW is located in the Southwestern California region of the California Floristic Province, as described in *The Jepson Manual* (Baldwin et al., 2012), within the South Coast subregion. In the San Gorgonio Pass, the route passes between the San Bernardino Mountains and the Peninsular Ranges subregions. East of the San Gorgonio Pass, to the Devers Substation, it is within the Sonoran Desert subregion.

The San Gorgonio Pass connects the deserts of the southwestern United States with the coastal, or cis-montane, lowlands of western California. This area is known for high winds that disperse and transport sand, creating distinct landscapes of sand dunes and windswept surfaces. The pass also serves as an important biological connection between the San Bernardino Mountains and the San Jacinto Mountains and the rest of the Peninsular Ranges to the south. Biological connectivity is discussed in Section D.5.1, under “Wildlife Movement.” Similar considerations apply to plant populations, which “move” over the course of generations via pollen and seed dispersal.

Topography along the route includes gently sloping broad plains, steep ridges, and large alluvial drainage systems extending from the foothills of the San Bernardino and San Jacinto Mountains. The ROW includes dedicated open space and conservation lands, expanses of undeveloped lands that may be subject to future development, and areas developed for urban, suburban, and agricultural uses. Because of the broad variation of natural and developed land cover types, the plants in the Proposed Project Area include many native and non-native species often associated with human land uses, as well as both rare and common native species usually associated with more natural land cover types.

The climate in the western part of the route is characterized by mild, wet winters and dry summers. Within the San Gorgonio Pass and to the east, the climate is much drier and generally hotter. Average annual precipitation is 16.1 inches in San Bernardino and 5.5 inches in Palm Springs. Most rainfall occurs from December through March, but can vary depending on summer thunderstorms (WRCC, 2012).

In Riverside County, 18.4 linear miles of the route (Segment 4 and portions of Segments 3 and 5) are within the Western Riverside County Multiple Species Habitat Conservation Plan (WR-MSHCP) area and 22 linear miles (Segment 6 and portions of Segment 5) are within the Coachella Valley Multiple Species Habitat Conservation Plan (CV-MSHCP) area. The WR-MSHCP area is divided into “Area Plans”; the route is within the Reche Canyon/Badlands and the Pass Area Plan. The CV-MSHCP area is divided into “Conservation Areas”; the route passes through the following Conservation Areas (from west to east): Cabazon, Stubbe and Cottonwood Canyons, Whitewater Canyon, and Upper Mission Creek/Big Morongo Canyon. Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7), depicts the locations of lands under federal or tribal jurisdiction as well as areas within the WR-MSHCP and CV-MSHCP.

### **Vegetation**

For purposes of this assessment, vegetation types of the Proposed Project Area are classified in the following categories: grassland/forbland, chaparral, coastal sage scrub (CSS), desert scrub, coast live oak woodland, riparian woodland, alluvial scrub, agricultural land, open water, and disturbed or developed areas. These vegetation types are further divided into alliances (similar plant communities defined by the

dominant or characteristic plant species in the upper layer of vegetation). Vegetation types are often used as a surrogate to describe plant or wildlife habitat, although habitat is best described in terms of multiple characteristics including vegetation, but also including topography, soils, and other parameters. Most habitat types are partially defined by vegetation, and one additional habitat type, aeolian (wind-blown) sand habitat, is defined by substrate. Aeolian sand, while not truly a vegetation type, is also included with the following descriptions.

Table D.4-1 provides the acreages of each vegetation community and habitat type found in the Proposed Project study area. The acreage of potential project-related impacts in each one is discussed in Section D.4.3, Environmental Impacts of the Proposed Project. Each vegetation community and habitat type is described below. Maps showing locations of vegetation communities and habitat types are provided in Figures Ap.7-2a through Ap.7-2k, Land Cover, and Figure Ap.7-4, Aeolian Sand Habitat (in Appendix 7).

**Grassland/forbland.** The grassland/forbland vegetation community is dominated by and includes almost exclusively herbaceous, non-woody plants. Communities with woody dominants, even when they contain significant amounts of herbaceous species, are included under shrubland or woodland communities (e.g., chaparral, desert scrub, riparian woodland). Grasslands are almost entirely dominated by grasses whereas forblands have significant cover of broadleaved herbs (forbs). Grasslands on the route are typically dominated by non-native species such as red brome (*Bromus madritensis* ssp. *rubens*), Mediterranean grass (*Schismus arabicus*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and slender wild oats (*Avena barbata*). Some non-native grasslands also contain a diversity of native species (Sawyer et al., 2009). There are no sensitive grassland communities in the project area.

**Table D.4-1. Acreage of Each Vegetation Community and Habitat Type in the Proposed Project Study Area**

| Vegetation Community or Habitat Type | Acreage within the Project Study Area |
|--------------------------------------|---------------------------------------|
| Developed/disturbed                  | 3,432.4                               |
| Desert scrub                         | 3,345.2                               |
| Grassland/forbland                   | 2,490.1                               |
| Coastal sage scrub                   | 1,373.9                               |
| Chaparral                            | 576.8                                 |
| Agriculture                          | 441.2                                 |
| Alluvial scrub                       | 386.0                                 |
| Riparian woodland                    | 145.1                                 |
| Coast live oak woodland              | 49.0                                  |
| Open water                           | 10.3                                  |
| Aeolian sand*                        | 178.0                                 |
| <b>Total</b>                         | <b>12,249.9</b>                       |

\*The area of aeolian sand habitat is occupied by desert scrub and included in the acreage for that community. The acreage for aeolian sand is therefore not added to the total.

Common native species found in forblands on the ROW are annual sunflower (*Helianthus annuus*), dove weed (*Eremocarpus setigerus*), and vinegar weed (*Trichostemma lanceolatum*). Common non-native forb species are short-pod mustard (*Hirschfeldia incana*), yellow star-thistle (*Centaurea solstitialis*), prickly wild lettuce (*Lactuca serriola*), and tocalote (*Centaurea melitensis*).

Forbland and grassland are scattered throughout the ROW, often in disturbed areas or in areas subject to some type of disturbance, such as development, wildfire, or livestock grazing. Grassland/forbland vegetation covers much of the open space in the San Timoteo Badlands (Segments 2 and 3) and west of the City of Beaumont (Segments 1 through 4). Grasslands and forblands also are found on slopes, intermixed with chaparral and coastal sage scrub.

One sensitive forbland community is found on the route. The *Amsinckia* Herbaceous Alliance (Fiddleneck Fields) is a seasonal community dominated by rancher's fiddleneck (*Amsinckia intermedia*) and numerous native and naturalized annual and perennial forbs and grasses. This alliance occupies upland slopes and valleys, and fallow fields with well-drained loamy soils. The *Amsinckia* Herbaceous Alliance has a Global

and State Rarity ranking of G4/S4 (Sawyer et al., 2009), meaning that the community is at fairly low risk of extinction or elimination due to an extensive range or many populations or occurrences, but with possible cause for concern as a result of local recent declines, threats, or other factors. This community is found in one small area in the San Timoteo Badlands along Segment 3, near Mile Point (MP) 7.0.

The G4/S4 rating does not automatically indicate an imperiled sensitive community. However, given the very limited distribution of this vegetation community in the project area and proximity of developed areas to this occurrence, the characterization of *Amsinckia* Herbaceous Alliance as a locally sensitive vegetation community within the project area is warranted.

**Chaparral.** Chaparral is a fire-adapted community that consists of dense evergreen shrubs. It can form impassable thickets measuring 4 to 8 feet high. On the Proposed Project route, chaparral is found primarily on north facing slopes and hilltops in Segments 2, 3, and 4, where it forms a mosaic with coastal sage scrub, forblands, and grasslands. Common native shrubs found in chaparral on the Proposed Project are chamise (*Adenostoma fasciculatum*), hairy ceanothus (*Ceanothus oliganthus*), sugar bush (*Rhus ovata*), hoaryleaf ceanothus (*Ceanothus crassifolius*), California scrub oak (*Quercus berberidifolia*), California sagebrush (*Artemisia californica*), redberry (*Rhamnus crocea*), mountain mahogany (*Cercocarpus betuloides*), toyon (*Heteromeles arbutifolia*), and the subshrubs California buckwheat (*Eriogonum fasciculatum*) and black sage (*Salvia mellifera*). Chaparral may also have an understory of non-native and native forbs and grasses. There are no sensitive chaparral communities on the Proposed Project.

**Coastal sage scrub.** Coastal sage scrub is dominated by low, drought-deciduous shrubs and subshrubs. Shrub cover is often dense and continuous, but some areas are sparse due to rocky outcrops that prevent dense growth. Coastal sage scrub is primarily found on steep, dry slopes and hilltops where it forms a mosaic with chaparral, grasslands, and forblands. Annual herbs, including weedy grasses and forbs and native wildflowers, are common in openings and disturbed areas. Several of the common shrubs also are found in chaparral, but coastal sage scrub is dominated by lower-growing soft-woody shrubs, whereas chaparral is dominated by taller dense-woody shrubs. Common native shrubs and subshrubs found in coastal sage scrub on the project route are California sagebrush, California buckwheat, black sage, redberry, sugar bush, ceanothus (*Ceanothus* spp.), lemonade berry (*Rhus integrifolia*), brittlebush (*Encelia farinosa*), Palmer's goldenbush (*Ericameria palmeri*), skunk bush (*Rhus trilobata*), and white sage (*Salvia apiana*). Coastal sage scrub in the Proposed Project region generally has an understory of non-native and native forbs and grasses. Coastal sage scrub is found mainly in the western third of the route, including the San Timoteo Badlands and the hills west of Beaumont (Segment 2 through Segment 4).

Coastal sage scrub is generally of conservation concern because it is the habitat of a listed threatened bird (California gnatcatcher, see Section D.5). In addition, one sensitive coastal sage scrub type is found on the Proposed Project. The *Keckiella antirrhinoides* Shrubland Alliance (Bush Penstemon Scrub) is typically dominated by bush penstemon (*Keckiella antirrhinoides*). It is ranked G3/S3 by the California Department of Fish and Wildlife (CDFW, formerly the California Department of Fish and Game; CDFG, 2010), meaning that it is considered vulnerable and at moderate risk of extinction. This community is found in several areas on the Proposed Project route: three locations in Segment 2 south of Colton and Loma Linda and at the San Bernardino Junction, several scattered locations in the Badlands in Segment 3, and one location at the easternmost end of Segment 4.

**Desert scrub.** Desert scrub plant communities are dominated and characterized by generally low-growing and widely spaced shrubs. Herbaceous vegetation beneath and between the shrubs includes annual and perennial herbs and grasses. Annuals are generally ephemeral, growing only during years when substantial rainfall occurs, and may be absent for several years until sufficient rain stimulates germination. Desert scrub is found on the eastern end of the Proposed Project route, on alluvial fans, washes, bajadas, valleys,

and upland slopes east of Banning (Segment 5), including the San Gorgonio River area (Segment 5) and Whitewater River area (Segment 6).

Common native shrub and subshrub species found in desert scrub communities on the Proposed Project are creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), Mormon tea (*Ephedra* spp.), catclaw (*Senegalia* [*Acacia*] *greggii*), brittlebush, Mojave rabbitbrush (*Ericameria paniculata*), narrow-leaved stillingia (*Stillingia linearifolia*), and turpentine broom (*Thamnosma montana*). Other species found in desert scrub on the Proposed Project are teddy bear cholla (*Cylindropuntia bigelovii*), hedgehog cactus (*Echinocereus engelmannii*), and Mojave yucca (*Yucca schidigera*). There are no sensitive desert scrub communities on the Proposed Project.

**Coast live oak woodland.** Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), with an understory consisting mainly of grasses and forbs. Oaks are the most evident plants, but the forests and woodlands are made up of diverse assemblages of understory shrubs, vines, herbs, grasses, and parasitic plants (e.g., mistletoe). Oak woodland is typically found in or adjacent to drainages and slopes. On the Proposed Project route, coast live oak woodland is found only on very limited areas of Segment 4: just east of San Timoteo Canyon Road and west of Sunset Avenue in Banning. Coast live oak woodland is not ranked as a sensitive vegetation community (CDFG, 2010).

**Riparian woodland.** Riparian woodlands can be found along drainage channels where surface or subsurface water remains throughout the year. Riparian woodlands are dominated by trees, and often extend linearly along stream courses. Three types of riparian woodland communities are found on the Proposed Project: *Chilopsis linearis* Woodland Alliance (Desert Willow Woodland), *Populus fremontii* Forest Alliance (Fremont Cottonwood Forest), and *Salix laevigata* Woodland Alliance (Red Willow Thicket). All three of these communities are of conservation concern and are rated G3/S3 or G4/S3 by CDFW (CDFG, 2010), meaning that they are considered vulnerable and at moderate risk of extinction.

- *Chilopsis linearis* Woodland Alliance is an open riparian wash woodland dominated by desert willow (*Chilopsis linearis*). On the Proposed Project route, it is found on Segment 3 in a wash in the Badlands near MP 8.0 and on Segment 5 along the San Gorgonio River.
- *Populus fremontii* Forest Alliance is an open-canopy woodland dominated by Fremont cottonwood (*Populus fremontii*). Associated species may include western sycamore (*Platanus racemosa*), red willow (*Salix laevigata*), and other willow species (*Salix* spp.). On the Proposed Project, this vegetation community is found on Segments 3 and 4 along San Timoteo Creek near El Casco Substation, and in Segment 4 along the unnamed canyon north of Theodore Street in Banning.
- *Salix laevigata* Woodland Alliance is dominated by red willow. On the Proposed Project, it is found along San Timoteo Canyon Road in Segments 3 and 4.

**Alluvial scrub.** Alluvial scrub consists of a mosaic of several vegetation types, characterized by openly spaced, low-growing shrubs adapted to intermittent or rarely flooded areas along washes, streams, and alluvial fans. The dominant plants in this vegetation on the Proposed Project route include mulefat (*Baccharis salicifolia*), scalebroom (*Lepidospartum squamatum*), cheesebush (*Ambrosia salsola*), and non-native grasses and forbs. Alluvial scrub is found mainly on the east end of the route (Segments 4, 5, and 6) along the San Gorgonio River, the Whitewater River, and several smaller washes. It is also found in several small areas throughout the route.

Two of the alluvial scrub communities found on the Proposed Project are of conservation concern and are rated G3/S3 or G4/S3 by CDFW (CDFG, 2010), meaning that they are considered vulnerable and at moderate risk of extinction: *Lepidospartum squamatum* Shrubland Alliance (Scalebroom Scrub) and *Ericameria paniculata* Shrubland Alliance (Black-stem Rabbitbrush Scrub).

*Lepidospartum squamatum* Shrubland Alliance is dominated or co-dominated by scalebroom in the shrub canopy. This alliance is found in intermittently or rarely flooded, low-gradient alluvial deposits along washes, streams, and fans (Sawyer et al., 2009). On the Proposed Project route, it is found in several small areas scattered across the Proposed Project. Larger expanses are found mainly on the east end of the Proposed Project (the east end of Segment 4 and Segments 5 and 6) associated with the San Gorgonio River, the Whitewater River, and several smaller washes.

*Ericameria paniculata* Shrubland Alliance is dominated by black-stem rabbitbrush (*Ericameria paniculata*) in the shrub canopy. This alliance is found in intermittently flooded arroyos, channels, and washes on well-drained soils (Sawyer et al., 2009). On the Proposed Project route, it is found in a small area on Segment 6 near Devers Substation.

**Agricultural.** Agricultural land is primarily composed of active or recently active crop fields and groves or orchards. These areas contain crop species and undesired “volunteer” species; both are almost always non-natives. On the Proposed Project route, agricultural land is found mainly in San Bernardino County (Segment 1) and to the west of Beaumont in Riverside County (Segment 4).

**Developed/disturbed.** This land cover consists of developed areas such as paved roads, ornamental vegetation, and commercial and residential properties.

**Open water.** Open water bodies are found at four locations within the Proposed Project study area and vicinity.

- In Segment 3, there is a detention basin just north of the San Timoteo Landfill and south of San Timoteo Canyon Road along Refuse Road. The basin is surrounded by riparian woodland vegetation and surface water is not always present.
- In Segment 3, the El Casco Lakes (approximately 12 acres) are located on the south side of San Timoteo Canyon Road. The lakes are maintained by the Riverside Land Conservancy, and are used for recreational fishing. The lakes are planned to be either emptied or allowed to return to a natural state due to the prohibitively high cost of continued maintenance.
- In Segment 3, there are three lakes (approximately 24 acres total) at Fisherman’s Retreat, a commercial campground and stocked fishing area, approximately 0.6 miles east of El Casco Lakes along San Timoteo Canyon Road.
- In Segment 5, water from the Robertson’s Plant 66 (gravel mine) is discharged into an inactive portion of the mine. The water level is variable, and the basin may occasionally lack surface water, but emergent riparian vegetation is present around the margins. The surface water area can vary from approximately 1 to 6 acres.

**Aeolian sand.** Aeolian (windblown) sand habitat is comprised of sand dunes and fields, including active, partially stabilized, and stabilized desert dunes and desert sand fields, and sand hummocks (CVAG, 2007). Hummocks are small dunes of sand that form downwind of desert shrubs. Aeolian sand provides habitat for certain special-status species, such as Coachella Valley milk-vetch. Within the project area, aeolian sand habitat is vegetated with desert scrub.

Aeolian sand habitat is found on Segment 6, east of the Whitewater River and in the Whitewater River wash. The CV-MSHCP classifies lands in this area as “sand source” east of the Whitewater River wash and “sand transport” in the wash itself, rather than sand field or sand dune habitat (CVAG, 2007); see Figure Ap.7-4, Aeolian Habitat (Appendix 7). Field surveys for the Proposed Project classified portions of the area east of the wash as dune habitat (GANDA, 2011). The CV-MSHCP also classified additional sand source and sand transport areas along the Segment 6 ROW west of the Whitewater River.

Stabilized and partially stabilized desert dunes and sand fields are classified by CDFW as G4/S3 (CDFG, 2010), meaning that they are considered vulnerable and at moderate risk of extinction.

### ***Invasive Plant Species***

Of the 393 species (including subspecies and varieties) of plants found in the Proposed Project study area during botanical surveys, 280 (71.2 percent) are native, and 113 (28.8 percent) are non-native (BRC, 2013). Of the 113 non-native species found in the Proposed Project study area, 40 are considered invasive (BRC, 2013), meaning that they can spread into wildlands and displace native species, hybridize with native species, alter biological communities, or alter ecosystem processes (Cal-IPC, 2014a).

The invasive species found within the Proposed Project study area are most notably within Segments 2, 3, and 4 where grazing and other disturbances have displaced dominant native plants with non-native ones. The vegetation in these segments is generally dominated by non-native annuals, predominantly grasses (*Bromus* spp.) and mustards (*Brassica* spp. and *Hirschfeldia incana*). Although natural vegetation in other portions of the Proposed Project study area is generally less disturbed and has a greater proportion of native vegetative cover, invasive species are common throughout the Proposed Project study area. The Proposed Project study area does not have any wildland areas that are largely free from invasive species.

The California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory identifies non-native plants that are serious problems in wildlands, and categorizes them as High, Moderate, or Limited based on each species’ negative ecological impact in California (ranging from severe to minor). Of the 40 invasive plant species observed within the Proposed Project study area, eight species are categorized as High, 18 are categorized as Moderate, and 14 are categorized as Limited (Cal-IPC, 2014b).

Species observed within the Proposed Project study area that are categorized as High are giant reed (*Arundo donax*), Sahara mustard (*Brassica tournefortii*), red brome (*Bromus madritensis* ssp. *rubens*), cheat grass (*Bromus tectorum*), sweet fennel (*Foeniculum vulgare*), Himalayan blackberry (*Rubus armeniacus*), Spanish broom (*Spartium junceum*), and Mediterranean tamarisk (*Tamarix ramosissima*). Of these, red brome, cheat grass, and Sahara mustard were observed in grassland and scrub areas throughout the Proposed Project study area. The remaining species were observed in isolated patches. All of these invasive species have naturalized and are now found throughout the region. Invasive species may spread locally, however, in response to Proposed Project–related disturbance. In addition, new invasive species may be introduced or spread widely before they are detected or documented. Of note, the CV-MSHCP (Section 4.5) and the WR-MSHCP (Section 6.1.4) both list invasive plants that should be avoided in plantings near conserved habitat.

### ***Recent Fires***

One fire burned within Segment 4 of the Proposed Project study area in 2013. The Summit Fire began north of the City of Banning on the afternoon of May 1, 2013, and was contained on the evening of May 4, 2013 (Banning-Beaumont Patch, May 8, 2013). The fire burned 3,166 acres in the vicinity of Mias Canyon and Bluff Road and the fire’s southwest edge crossed into the Proposed Project study area, including a

section of the ROW about 2,000 feet long. For purposes of this assessment, it is assumed that the burned areas will recover to approximately the pre-fire condition (LSA, 2013b).

Two recent fires burned land cover within 1 mile of the Proposed Project study area in Segment 3. The Viper Fire started near Viper Road along the southern edge of San Timoteo Canyon Road just west of Redlands Boulevard and north of the City of Moreno Valley. The 42-acre fire began on June 8, 2013, and was contained the same day. The small fire was centrally located in Segment 3 within 500 feet of the existing WOD corridor. The Redlands Fire started just west of Redlands Boulevard south of San Timoteo Canyon Road and north of the City of Moreno Valley. The 150-acre fire began on July 16, 2013, and was contained the next day. The small fire was centrally located in Segment 3 within 0.25 miles of the existing WOD corridor.

### ***Special-status Plant Species***

Table Ap.7-1 (in Appendix 7) lists special-status plant species occurring or potentially occurring in the Proposed Project area, with conservation status and habitat descriptions for each species. Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations, depicts the locations of federal- and state-listed and state designated special-status plant species that were observed during surveys conducted between 2011 and 2013. For species not observed during surveys, the potential for their occurrence was determined by biologists knowledgeable about each species based on the species' habitat requirements, range (including elevation), and previously recorded observations within the region. Potential for occurrence is ranked as present, high, moderate, low, and not likely to occur. The criteria used to make these determinations are listed in Appendix 7. Detailed accounts for these species are provided in the *Biological Resources Technical Report* (LSA, 2013b).

Twenty-five special-status plant species occur or may occur in the Proposed Project study area, including four species listed under the federal Endangered Species Act (ESA), California Endangered Species Act (CESA), or both. The listed species are Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*; federal endangered), triple-ribbed milk-vetch (*Astragalus tricarinatus*; federal endangered), Nevin's barberry (*Berberis nevinii*; federal and state endangered), and Mojave tarplant (*Deinandra mohavensis*; state endangered).

**Critical habitat.** In Segment 6, the Proposed Project route passes over the Whitewater River, where there is federally designated critical habitat<sup>1</sup> for Coachella Valley milk-vetch (*Astragalus lentiginosus* var. *coachellae*). Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7) show the locations of designated critical habitats. Coachella Valley milk-vetch critical habitat occupies 109.8 acres within the Proposed Project study area and extends along the ROW for approximately 0.3 miles, mainly in desert scrub and alluvial scrub habitats.

### ***Wetlands and Other Waters***

A drainage assessment was conducted for the Proposed Project to identify the locations and general configurations of potential drainage features. The Preliminary Jurisdictional Drainage Assessment is included in *Biological Resources Technical Report* (LSA, 2013b) as Appendix N, Drainage Assessment Report, and information in this section is from that report. The Drainage Assessment Report provides a full description of individual drainage features and their representative characteristics, such as average width and associated vegetation, but a delineation of jurisdictional wetlands and other waters has not yet been conducted.

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<sup>1</sup> Geographic areas designated by the United States Fish and Wildlife Service [USFWS] in Recovery Plans that contain features essential to conservation and recovery of threatened or endangered species.



On the Proposed Project route, drainages with perennial surface water typically have riparian vegetation such as willows or mulefat (e.g., riparian woodland, above). Some drainages with ephemeral water have riparian vegetation, but most have ruderal, alluvial scrub, or chaparral vegetation. Some drainages may be in flood control channels that are regularly maintained or are lined with concrete or cobble and do not support vegetation. Table D.4-2 illustrates both the number of drainages identified within the entire project study area and the number of drainages identified within each segment.

### ***U.S. Army Corps of Engineers Jurisdiction***

**Non-wetland waters.** Up to 275 non-wetland drainages that meet the U.S. Army Corps of Engineers (USACE) nexus criteria were identified within the Proposed Project study area. Drainages within the western half of the Proposed Project study area (Segments 1 through 4) generally flow north or southwest into Reche Canyon, Mission Channel, San Timoteo Canyon, or San Timoteo Creek and eventually reach the Santa Ana River, which is tributary to the Pacific Ocean, a traditional navigable water (TNW). As mentioned above, vegetation in these drainages is primarily riparian, ruderal, scrub, or chaparral. The remaining drainages, found in the eastern part of the Proposed Project Area (Segments 4 through 6) and located in the City of Banning, on the reservation, or situated farther east up to Devers Substation, generally flow south or southeast into either the San Gorgonio River, the Whitewater River, Super Creek, or Garnet Wash, each of which then flows into the Salton Sea (a TNW).

Because the Pacific Ocean and the Salton Sea are TNWs, several of the drainages in the Proposed Project study area, or tributaries thereof, are potentially subject to USACE jurisdiction pursuant to Section 404 of the Clean Water Act (CWA). Preparation of a jurisdictional delineation, with a Preliminary or Approved Jurisdictional Determination by the USACE, would determine jurisdictional status.

**Wetland waters.** There are up to 26 drainages within the Proposed Project study area that were identified with the potential to satisfy the three criteria necessary to meet the USACE definition of a wetland (i.e., presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology).

### ***California Department of Fish and Wildlife Jurisdiction***

All of the potential USACE jurisdictional areas, outside of those found on Morongo Tribal Lands, would also be considered CDFW jurisdictional. In addition, the Preliminary Jurisdictional Drainage Assessment included in Appendix F of the PEA (SCE, 2013) indicates that 196 drainages that did not meet the USACE nexus criteria, but showed evidence of a bed and bank (e.g., not categorized as swales) were also identified and are potentially subject to CDFW jurisdiction. Of the 196 drainages, an unknown number are on Morongo Tribal Lands and not subject to CDFW jurisdiction. Riparian vegetation, such as willows and mulefat, associated with these drainages is also potentially under CDFW jurisdiction.

### ***State Water Resources Control Board Jurisdiction***

The western portion of the Proposed Project falls within the jurisdictional boundaries of the Santa Ana Regional Water Quality Control Board (RWQCB) and the eastern portion falls within the jurisdictional boundaries of the Colorado River RWQCB. If a project extends into multiple RWQCB boundaries, it is subject to regulation by the State Water Resources Control Board (SWRCB). Areas of potential SWRCB jurisdiction coincide with the limits of potential USACE jurisdiction, per the September 2004 Workplan (SWRCB, 2004). These areas may be subject to SWRCB jurisdiction through provisions in the CWA.

In addition, areas that are potentially subject to CDFW jurisdiction, but do not qualify as USACE jurisdiction (i.e., isolated areas with a bed and bank that do not connect to a TNW and isolated wetlands), may also be subject to SWRCB jurisdiction through Porter-Cologne. Portions of the Proposed Project within the

Morongo Indian Reservation are not subject to regulation by SWRCB, but are under the jurisdiction of the U.S. Environmental Protection Agency (EPA) and regulated under Section 401 of the Clean Water Act.

#### ***Western Riverside County MSHCP Riparian/Riverine/Vernal Pool Areas***

**Riparian/riverine areas.** No specific assessment of riparian/riverine areas subject to the provisions of the WR-MSHCP portion of the Proposed Project study area was made, because SCE is not currently a Participating Special Entity (PSE).

All of the existing riparian communities within the WR-MSHCP that occur within the Proposed Project study area likely fall under the regulatory jurisdiction of the USACE pursuant to Section 404 of the CWA and the CDFW pursuant to Section 1600 of the California Fish and Game Code. Therefore, until a jurisdictional delineation has been completed to confirm jurisdictional status, all drainage features subject to conditions of the WR-MSHCP Riparian/Riverine guidelines were identified as potentially jurisdictional by the USACE and the CDFW. There are a total of 59 riverine or riparian areas identified within the WR-MSHCP planning area, which is in Segments 2, 3, and 4.

**Vernal pool areas.** None of the seasonally ponded depressions found during the vernal pool assessment survey conducted between November 2011 through March (May for water level site checks) 2013 met the WR-MSHCP criteria for vernal pools. Locations and a full description of surveyed ponded depressions can be found in the *Biological Resources Technical Report* (LSA, 2013b), Appendix E, Fairy Shrimp Survey Reports.

#### ***Coachella Valley MSHCP Desert Wetland Communities***

The CV-MSHCP only protects jurisdictional drainages as they relate to the Natural Communities Conservation Goals within the Conservation Areas. No communities identified as wetland communities in the CV-MSHCP are present within the Proposed Project study area. However, drainages within the area encompassed by the CV-MSHCP may still be regulated under other agency authorities (USACE, EPA, CDFW, and SWRCB).

**Table D.4-2. Drainage Counts Identified During 2012 and 2013 Assessment Surveys**

| Segment | Potentially Jurisdictional<br>Wetland Drainages<br>USACE / EPA / CDFW / SWRCB | Potentially Jurisdictional<br>Non-wetland Drainages<br>USACE / EPA / CDFW / SWRCB | Potentially Jurisdictional<br>Non-wetland Drainages<br>CDFW / SWRCB |
|---------|---|---|---|
| 1       | 2   | 28  | 13  |
| 2       | 5   | 48  | 46  |
| 3       | 6   | 69  | 74  |
| 4       | 12  | 51  | 27  |
| 5       | 0   | 44  | 13  |
| 6       | 1   | 35  | 23  |
| Total   | 26  | 275   | 196   |

#### **D.4.1.2 Environmental Setting by Segment**

The following sections briefly describe vegetation resources along the Proposed Project route by segment (see Figure B-1, Project Location Map) with location-specific discussions of plant communities, habitats, and special-status plants.

**Substations.** There are no new substations proposed as part of the Proposed Project. Modifications to existing substation equipment would be performed in the Vista, San Bernardino, El Casco, Etiwanda, and Devers Substations. Additionally, modifications to Timoteo and Tennessee Substations would be performed. Figures B-1 through B-7 (Section B) show the substation locations.

The Proposed Project would not result in changes to access roads, parking areas, drainage patterns, or modifications to perimeter walls or fencing at the existing substations. All substation construction activities would be entirely contained within the perimeter fences, which surround these developed and highly disturbed areas. The following substations have proposed grading and surface improvements (location and land use jurisdiction in parentheses):

- San Bernardino Substation (Segment 1; San Bernardino County).
- Timoteo Substation (Segment 1; San Bernardino County).
- Vista Substation (Segment 2; San Bernardino County).
- Tennessee Substation (off the ROW north of Segment 3; San Bernardino County).
- El Casco Substation (boundary of Segments 3 and 4; Riverside County, WR-MSHCP).
- Devers Substation (Segment 6; Riverside County, CV-MSHCP).

Other substations that are included in the Proposed Project but do not have proposed grading or surface improvements are:

- Maraschino Substation (Segment 4; Riverside County, WR-MSHCP).
- Banning Substation (Segment 5; Riverside County, WR-MSHCP).
- Etiwanda Substation (off ROW in Rancho Cucamonga; San Bernardino County).

Work in Maraschino Substation will entail installing fiber optic cable in an existing underground conduit and cable trench to the Mechanical and Electrical Equipment Room (MEER). Work at Banning Substation will entail installation of fiber optic cable and new underground conduit into the MEER. Work at Etiwanda Substation will occur on equipment within the existing MEER. Please see Section B (Description of the Proposed Project) for details. Habitat within the substations is generally categorized as developed or disturbed, and is unlikely to support special-status plant species.

**Staging yards.** SCE anticipates using one or more of the possible temporary staging yards listed in Table B-5, and shown on Figures B-1 through B-7 (Section B), which show the Proposed Project area. These staging yards would be used as reporting locations for workers, vehicle and equipment parking, and material storage. Yards range from approximately 2.8 acres to 30 acres. Preparation of the staging yard would include temporary perimeter fencing and, depending on existing ground conditions at the site, include the application of gravel or crushed rock. Any land that may be disturbed at the staging yard would be restored to pre-construction conditions or to conditions agreed upon between SCE and the landowner following the completion of construction for the Proposed Project.

Some of the potential staging yards have been improved so that Project can use them without further modifications; see Table B-6. These potential staging yards were improved during earlier construction activities or as land uses unrelated to the Proposed Project. Impacts to vegetation or special-status plants at staging yards may include the following:

- Removal or destruction of vegetation and habitat within the staging yard.
- Impacts to potentially jurisdictional drainage features and associated habitat, which could adversely affect water quality and habitat value.

- Loss of topsoil, erosion, downstream sedimentation, and changes to hydrology, which could degrade downstream water quality and habitat value.
- Introduction of nonnative plant species as a result of seed-contaminated vehicles, clothes, or equipment.

At the following five potential staging yard locations, vegetation and habitat consist of disturbed land (e.g., forbland/grassland, disturbed/developed) and no special-status vegetation communities, potentially jurisdictional drainage features, or special-status plants are expected to occur.

- Mountain View 1 Staging Yard (Segment 1; San Bernardino County)
- Lugonia Staging Yard (Segment 1; San Bernardino County)
- Grand Terrace Staging Yard (Segment 2; San Bernardino County)
- Beaumont 1 Staging Yard (Segment 4; Riverside County, WR-MSHCP)
- Beaumont 2 Staging Yard (Segment 4; Riverside County, WR-MSHCP)

The remaining six potential staging yard locations support limited native vegetation or habitat, potentially jurisdictional drainage features, or may support special-status species, as follows:

**Poultry Staging Yard (Segment 3; Riverside County, WR-MSHCP).** Use of the area may result in impacts up to approximately 20.7 acres, of which 2.9 acres are coastal sage scrub and the remainder is agricultural lands. The coastal sage scrub present is on a slope in the southwest corner of the site and is unlikely to be affected. Potentially jurisdictional drainage features are located within the staging yard area.

**San Timoteo Staging Yard (Segment 3; Riverside County, WR-MSHCP).** Impacts to land cover due to construction and use of the staging yard would affect up to 15.5 acres of agricultural land, 0.6 acres of developed/disturbed areas, and 0.6 acres of coastal sage scrub. No potentially jurisdictional drainage features or riparian vegetation are expected to be affected. No special-status plant species are expected to occur within the potential disturbance areas.

**Hathaway 1 Staging Yard (Segment 5; Riverside County, WR-MSHCP).** Potential impacts would affect forbland/grassland (up to 6.9 acres) and disturbed/developed areas (up to 22.6 acres) within the staging yard. No sensitive vegetation communities or potentially jurisdictional drainage features are present within the expected disturbance areas.

**Hathaway 2 Staging Yard (Segment 5; Riverside County, WR-MSHCP).** Use of the area may result in impacts to forbland/grassland (up to 14.3 acres) which could support special-status species within the staging yard; therefore, special-status species may be affected. No sensitive vegetation communities or potentially jurisdictional drainage features are present within the expected disturbance areas.

**Match Material and Equipment Staging Yard (Segment 5; Riverside County, WR-MSHCP).** The site has historically been used as an equipment and materials yard. The surface is approximately 50 percent concrete (paved) and 50 percent friable soil. A field visit on February 17, 2016 found that the non-paved portions of the yard have some disturbed and ruderal vegetation. There is a strip of scrub vegetation, approximately 50 by 500 feet, along the east side of the yard, which may retain some native habitat value. No sensitive vegetation communities or potentially jurisdictional drainage features occur within the existing yard.

**Devers Staging Yard (Segment 6; Riverside County, CV-MSHCP).** Use of the area may result in impacts to disturbed desert scrub (up to 10.0 acres) within the staging yard which could support special-status plant

species. No sensitive vegetation communities are present within the disturbance areas. Potential jurisdictional drainage features are present and would be impacted by construction and use of the staging yard.

#### **D.4.1.2.1 Segment 1: San Bernardino**

Segment 1 is approximately 3.5 miles long, extending from San Bernardino Substation south to San Bernardino Junction, through lands in unincorporated San Bernardino County and the Cities of Redlands and Loma Linda (Figure B-2a, Proposed Transmission Line Route – Segment 1). The entire segment is within San Bernardino County. It is not covered by the WR-MSHCP, CV-MSHCP, nor is it on BLM or reservation lands; Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7). Much of Segment 1 is within disturbed or developed areas, or on agricultural lands between commercial and industrial buildings. The most important native habitat areas are at the southern end, around Scotts Canyon and San Bernardino Junction.

In addition to the proposed work within the WOD corridor, Project-related work in Segment 1 would include relocation of subtransmission and distribution lines in developed areas to the east of the main WOD corridor. See Section B.2, Description of Proposed Project Components, for details. Substation and staging yards associated with this segment are described above.

#### ***Vegetation and Habitat***

At the southern end of Segment 1, the ROW crosses undeveloped hilly terrain south of Loma Linda. The area is crisscrossed by dirt roads and trails. Vegetation consists mainly of non-native grassland with some coastal sage scrub and chaparral; see Figures Ap.7-2a through Ap.7-2k, Land Cover (in Appendix 7). No sensitive vegetation communities were found in Segment 1. Vegetation and habitat in the San Bernardino Junction area, where Segments 1, 2, and 3 come together, is described under Segment 2, below.

#### ***Special-status Plants***

Several special-status plant species have a low or moderate potential to occur within Segment 1, including Nevin's barberry. No special-status plant species have a high potential to occur on Segment 1, and none were observed during surveys. (Table Ap.7-1 in Appendix 7 lists special-status plants occurring or potentially occurring in the Proposed Project area, with conservation status and habitat descriptions for each species.) Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7) shows where federal- and state-listed and special-status plant species were observed during surveys conducted between 2011 and 2013. For species not observed during surveys, the potential for their occurrence was determined by biologists knowledgeable about each species, based on the species' habitat requirements and geographic range (LSA, 2013b).

Nevin's barberry has a moderate potential to occur on Segment 1. There is potentially suitable habitat present at the southernmost end of the segment and three documented occurrences nearby (CNDDb, 2014; CCH, 2014; U.S. Fish and Wildlife Service [USFWS], 2009a; see Segment 3, below). Nevin's barberry is an evergreen shrub with showy yellow flowers, and mature plants should be easily identifiable during field surveys. Nevin's barberry was not observed on Segment 1, or anywhere on the Proposed Project route, during botanical surveys in 2012 and 2013 (BRC, 2013).

#### **D.4.1.2.2 Segment 2: Colton and Loma Linda**

Segment 2 is approximately 5.0 miles long and extends from Vista Substation east to San Bernardino Junction, within the Cities of Grand Terrace, Colton, and Loma Linda; see Figure B-3a, Proposed Transmission

Line Route – Segment 2. The entire segment is within San Bernardino County, and is not covered by the WR-MSHCP, CV-MSHCP, nor is it on BLM or reservation lands; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7). Segment 2 begins at the Vista Substation in Grand Terrace, proceeds east, crosses Interstate 215 (I-215), and traverses steep slopes on the boundaries of residential areas. It passes over Reche Canyon, and continues into the western portion of the San Timoteo Badlands, to San Bernardino Junction. Substation and staging yards associated with this segment are described above.

### ***Vegetation and Habitat***

The west end of Segment 2 crosses developed and residential areas. The remainder of the segment crosses undeveloped hilly terrain south of Loma Linda. The area is crisscrossed by dirt roads and trails. Vegetation consists mainly of non-native grassland with some patches of coastal sage scrub and chaparral; see Figures Ap.7-2a through Ap.7-2k, Land Cover (in Appendix 7).

One sensitive coastal sage scrub community, *Keckiella antirrhinoides* Shrubland Alliance, is found on Segment 2 in the hills south of Colton and Loma Linda and at the San Bernardino Junction. This vegetation type is described in Section D.4.1.1, Vegetation.

### ***Special-status Plants***

Several special-status plant species have a low or moderate potential to occur within Segment 2, including Nevin's barberry. No special-status plant species have a high potential to occur on Segment 2, and none were observed during surveys (see Table Ap.7-1 in Appendix 7; LSA, 2013b).

Nevin's barberry has a moderate potential to occur on Segment 2, but was not observed on Segment 2, or anywhere on the Proposed Project route, during botanical surveys in 2012 and 2013 (BRC, 2013). There is potentially suitable habitat present at the western end of the segment and three documented occurrences in the Proposed Project vicinity (see Segment 3, below).

#### **D.4.1.2.3 Segment 3: San Timoteo Canyon**

Segment 3 is approximately 10.0 miles long, extending from San Bernardino Junction southeast to El Casco Substation, across the San Timoteo Badlands, and roughly parallel to San Timoteo Canyon Road for much of its length; see Figure B-4a, Proposed Transmission Line Route – Segment 3. The segment crosses lands administered by the Riverside County Regional Conservation Authority, Riverside Land Conservancy, County of Riverside Regional Parks and Open Space Districts, and California Department of Parks and Recreation.

The western end of Segment 3 is in San Bernardino County, from the San Bernardino Junction to approximately MP 8.8. The eastern end of Segment 3 is in Riverside County and is covered by the WR-MSHCP from approximately MP 8.8 to the El Casco Substation (MP 15.2). No part of Segment 3 is covered by the CV-MSHCP, nor is it on BLM or reservation lands; Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7).

There are residential developments near the El Casco Substation, and scattered agricultural and residential properties along the route.

Project-related work in Segment 3 would also include installation of telecommunication lines along San Timoteo Canyon Road north of the main WOD corridor. See Section B.2, Description of Proposed Project Components, for details. Substation and staging yards associated with this segment are described above.

### **Vegetation and Habitat**

The majority of Segment 3 is in the hilly terrain of the Badlands south of Loma Linda, Redlands, and Calimesa. The area is crisscrossed by dirt roads and trails; vegetation and habitat consists mainly of non-native grassland, coastal sage scrub, and chaparral. There is also riparian woodland along San Timoteo Canyon; see Figures Ap.7-2a through Ap.7-2k, Land Cover (in Appendix 7).

Five sensitive vegetation communities are found on Segment 3 (see Section D.4.1.1, Vegetation):

- *Amsinckia* Herbaceous Alliance (Fiddleneck Fields) is found in one small area in the Badlands near MP 7.0.
- *Keckiella antirrhinoides* Shrubland Alliance (Bush Penstemon Scrub) is found in several scattered locations in the Badlands.
- *Chilopsis linearis* Woodland Alliance (Desert Willow Woodland) is found in a wash in the Badlands near MP 8.0.
- *Populus fremontii* Forest Alliance (Fremont Cottonwood Forest) is found along San Timoteo Creek near El Casco.
- *Salix laevigata* Woodland Alliance (Red Willow Thicket) is found along San Timoteo Canyon Road.

Vegetation and habitat in the San Bernardino Junction area, where Segments 1, 2, and 3 come together, is included in the discussion of Segment 2.

### **Special-status Plants**

One special-status species, Nevin's barberry, has a high potential to occur. Two additional special-status species were observed during surveys on Segment 3 (Plummer's mariposa-lily [*Calochortus plummerae*] and smooth tarplant [*Centromadia pungens* ssp. *laevis*]) (see Table Ap.7-1 in Appendix 7; LSA, 2013b). Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7) shows the locations where these species were observed. A number of additional special-status plants have a low or moderate potential to occur within Segment 3, including the state-listed endangered Mojave tarplant.

Potentially suitable Nevin's barberry habitat is present on Segment 3, and there are three documented occurrences in this part of the ROW (CNDDDB, 2014; CCH, 2014; USFWS, 2009a):

- CNDDDB Occurrence #4 (San Timoteo Canyon) with three individuals reported extant in 2009 (CNDDDB, 2014; CCH, 2014; USFWS, 2009a). This occurrence is located partially within the Proposed Project study area on Segment 3, approximately 3 miles east of the San Bernardino Junction (MP 8.0).
- CNDDDB Occurrence #5 (Scott Canyon) with one individual reported extant in the 1990s (date not specified; USFWS, 2009a). This occurrence is entirely within the Proposed Project study area on Segment 3, just east of the San Bernardino Junction (MP 5.0). The 1990s report stated that the plant had recently been burned in a fire. Nevin's barberry is capable of resprouting after fire (USFS, 2012); it is unknown if the shrub may have survived, but it was not observed during field surveys (LSA, 2013a).
- CNDDDB Occurrence #40 (Pilgrim Road) reported extirpated in 2006 by a reliable observer (USFWS, 2009a). This occurrence is partially within the Proposed Project study area on Segment 3, approximately 1.6 miles east of the San Bernardino Junction (MP 6.6).

Nevin's barberry is an evergreen shrub with showy yellow flowers, and mature plants should be easily identifiable during field surveys. Nevin's barberry was not observed on Segment 1, or anywhere on the Proposed Project route, during botanical surveys in 2012 and 2013 (BRC, 2013).

Mojave tarplant has a low potential to occur on Segment 3. Suitable habitat may be present, but there are no documented occurrences within 5 miles of the ROW (GANDA, 2011; CNDDDB, 2014).

#### **D.4.1.2.4 Segment 4: Beaumont and Banning**

Segment 4 is approximately 12.0 miles long and extends from the El Casco Substation east to the western edge of the Morongo Indian reservation at San Gorgonio Avenue in the City of Banning; see Figure B-5a, Proposed Transmission Line Route – Segment 4. The entire segment is within Riverside County and within the WR-MSHCP plan area. The ROW crosses a parcel of Morongo Indian Reservation land west of Sunset Avenue in Banning. No part of Segment 4 is covered by the CV-MSHCP, nor is it on BLM lands; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7).

Segment 4 crosses an alluvial deposit from Little San Gorgonio Creek and Noble Creek, which flow into San Timoteo Creek. San Timoteo Creek then flows northwest along the northern edge of the San Timoteo Badlands, and continues northwest through San Timoteo Canyon, the City of Loma Linda, and eventually flows into the Santa Ana River.

From just east of the El Casco Substation, through the City of Beaumont, the Segment 4 ROW is largely within or adjacent to housing and other developed or disturbed lands. East of Beaumont, it crosses open space in the hills north of Banning to the Morongo Indian reservation boundary.

Project-related work in Segment 4 would include installation of telecommunication lines from the Proposed Project ROW to Maraschino Substation in Beaumont and thence to the Devers–Palo Verde No. 2 (DPV2) ROW south of Beaumont. The entirety of this work will be within Segment 4. Telecommunication lines would also be installed from the Proposed Project ROW to the Banning Substation and thence to the DPV2 ROW south of Banning; only the westernmost portion of this work will be within Segment 4, with the remainder in Segment 5. See Section B.2, Description of Proposed Project Components, for details. Substation and staging yards associated with this segment are described above.

#### ***Vegetation and Habitat***

Vegetation along Segment 4 is mainly developed/disturbed, grassland/forbland, or agriculture. There are areas of riparian woodland, coast live oak woodland, and chaparral on the west end near San Timoteo Creek, and chaparral, coastal sage scrub, and alluvial scrub on the east end near the San Gorgonio River; see Figures Ap.7-2a through Ap.7-2k, Land Cover (in Appendix 7). Four sensitive vegetation communities are found on Segment 4 (see Section D.4.1.1, Vegetation):

- *Keckiella antirrhinoides* Shrubland Alliance (Bush Penstemon Scrub) is found in one location at the easternmost end of the segment.
- *Populus fremontii* Forest Alliance (Fremont Cottonwood Forest) is found along San Timoteo Creek near El Casco Substation and along the unnamed canyon north of Theodore Street in Banning.
- *Salix laevigata* Woodland Alliance (Red Willow Thicket) is found along San Timoteo Canyon Road.
- *Lepidospartum squamatum* Shrubland Alliance (Scalebroom Scrub) is found along the San Gorgonio River wash.

A wildfire burned land cover within Segment 4 of the Proposed Project study area in May 2013. The fire burned 3,166 acres in the vicinity of Mias Canyon and Bluff Road and the fire's southwest edge crossed into the Proposed Project study area. A mapped range of this fire can be found in Appendix O, Land Cover Figure, of the *Biological Resources Technical Report* (LSA, 2013b). For purposes of this assessment, it is



assumed that the burned areas will recover to approximately the pre-fire condition as represented by the vegetation mapping.

### ***Special-status Plants***

Two special-status species, chaparral sand-verbena (*Abronia villosa* var. *aurita*) and smooth tarplant, have a high potential to occur in Segment 4 and three additional special-status species were observed during surveys: Yucaipa onion (*Allium marvinii*), Plummer's mariposa-lily, and Engelmann oak (*Quercus engelmannii*). Please see Table Ap.7-1 and Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7). Several special-status plant species have a low or moderate potential to occur within Segment 4, including Nevin's barberry and Mojave tarplant.

Nevin's barberry has a low potential to occur on Segment 4. There is limited suitable habitat present, and no documented occurrences within 5 miles of the ROW (GANDA, 2011; CNDDDB, 2014). Nevin's barberry was not observed on Segment 4 during botanical surveys in 2012 and 2013 (BRC, 2013).

Mojave tarplant has a low potential to occur on Segment 4. Suitable habitat may be present, but the nearest documented occurrence was recorded in 1924 along Highway 243 about 0.7 miles south of the ROW (LSA, 2013b; CNDDDB, 2014).

#### **D.4.1.2.5 Segment 5: Morongo Tribal Lands and Surrounding Areas**

Segment 5 is approximately 9.0 miles long and extends through the Morongo reservation for most of its length. The segment begins at San Gorgonio Avenue in the City of Banning. Heading east, it crosses and re-crosses the winding San Gorgonio River, traverses the Robertson's Plant 66 aggregate quarry, and the alluvial drainages of Millard Canyon, Deep Canyon, and Lion Canyon, ending at Rushmore Avenue in the community of Whitewater; see Figure B-6a, Proposed Transmission Line Route – Segment 5.

The eastern portion of the Proposed Project study area (i.e., Segments 5 and 6) traverses the foothills of the San Bernardino Mountains. This area consists of alluvial deposits from multiple ephemeral rivers, streams, and washes. Major drainages in this portion are the San Gorgonio and Whitewater Rivers, which ultimately feed into the Salton Sea. Dominant soil series or types are described in the *Biological Resources Technical Report* (LSA, 2013b).

The entire segment is within Riverside County. The west end is covered by the WR-MSHCP (approximately MP 27.4 to 30.6). The east end is covered by the CV-MSHCP (approximately MP 30.6 to 36.9), and runs through portions of the CV-MSHCP Cabazon Conservation Area. Much of the segment is on reservation lands, but it does not traverse BLM lands; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7).

Project-related work in Segment 5 includes installation of telecommunication lines from the Proposed Project ROW to the Banning Substation and thence to the DPV2 ROW south of Banning; most of this work is within Segment 5, with only the westernmost portion within Segment 4. See Section B.2, Description of Proposed Project Components, for details. Substation and staging yards associated with this segment are described above.

### ***Vegetation and Habitat***

Segment 5 crosses the San Gorgonio River and several smaller alluvial drainages. Desert scrub is found along most of the segment. Alluvial scrub occupies the San Gorgonio River wash and the smaller drainages. There are small areas of riparian vegetation in Robertson's Plant 66 and along a short section of the San Gorgonio River; see Figures Ap.7-2a through Ap.7-2k, Land Cover (in Appendix 7). The corridor runs

mainly through open space, with scattered rural residential housing, and a short section that is adjacent to the Cabazon Outlet Mall.

Two sensitive vegetation communities are found on Segment 5:

- *Chilopsis linearis* Woodland Alliance (Desert Willow Woodland) is found along the San Gorgonio River.
- *Lepidospartum squamatum* Shrubland Alliance (Scalebroom Scrub) is found along the San Gorgonio River wash.

These communities are described in Section D.4.1.1, Vegetation.

#### **Special-status Plants**

Two special-status plants have a high potential to occur in Segment 5: chaparral sand-verbena and little San Bernardino Mountains linanthus (*Linanthus maculatus*). Three additional special-status species were observed during surveys on Segment 5: Parry's spineflower (*Chorizanthe parryi* var. *parryi*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), and southern California black walnut (*Juglans californica*). See Table Ap.7-1 and Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7). Several other special-status plants have a low or moderate potential to occur within Segment 5, including Coachella Valley milk-vetch, triple-ribbed milk-vetch, and Mojave tarplant.

Coachella Valley milk-vetch has a moderate potential to occur in Segment 5. Suitable habitat is present, and there are documented occurrences within 5 miles of the proposed ROW (GANDA, 2011). It was not observed during botanical surveys in 2012 and 2013 (BRC, 2013).

Triple-ribbed milk-vetch has a low potential to occur in Segment 5. There is marginally suitable habitat present in the Whitewater River wash, but triple-ribbed milk-vetch would only occur within the route as isolated individuals originating as seed dispersed downstream from the much larger populations in the upper Whitewater River watershed. The nearest documented occurrences are near the Whitewater River in Segment 6, over 4 miles from the east end of Segment 5 (LSA, 2013b). It was not observed during botanical surveys in 2012 and 2013 (BRC, 2013).

Mojave tarplant has a low potential to occur on Segment 5. Suitable habitat is potentially present, but the nearest documented occurrence was recorded in 1924 along Highway 243 about 0.7 miles south of the ROW (CNDDDB, 2014). It was not observed during botanical surveys in 2012 and 2013 (BRC, 2013).

#### **D.4.1.2.6 Segment 6: Whitewater and Devers**

Segment 6 is approximately 8.0 miles long and extends from the eastern boundary of the Morongo reservation at Rushmore Avenue to the eastern terminus of the Proposed Project Route at the Devers Substation. From Rushmore Avenue, it proceeds east across the alluvial drainages of Stubbe Canyon and Cottonwood Canyon, and then the alluvial terraces of the Whitewater River and the alluvial drainage of Super Creek. It crosses State Route 62 (SR-62) into the Coachella Valley, where it ends at Devers Substation located west of the City of Desert Hot Springs; see Figure 7a, Proposed Transmission Line Route – Segment 6.

The entire segment is within Riverside County and within the CV-MSHCP area. Segment 6 runs through portions of the CV-MSHCP Stubbe and Cottonwood Canyons Conservation Area, Whitewater Canyon Conservation Area, and Upper Mission Creek/Big Morongo Canyon Conservation Area. The segment does not cross reservation lands, but it traverses scattered small parcels of BLM land; see Figures Ap.7-1a through Ap.7-1k, Land Management and Critical Habitat Areas (in Appendix 7). Substation and staging yards associated with this segment are described above.

### ***Vegetation and Habitat***

Segment 6 passes mainly through undeveloped open space along the foothills of the San Bernardino Mountains. There is rural residential development off Haugen-Lehmann Way. East of Whitewater Canyon, the proposed route passes by scattered residences and through wind energy projects (wind farms). Vegetation is mainly desert scrub, with alluvial scrub along the Whitewater River and other drainages, and aeolian sand habitat east of the Whitewater River; see Figures Ap.7-2a through Ap.7-2k, Land Cover and Figure Ap.7-4, Aeolian Habitat (in Appendix 7).

Three sensitive vegetation communities and habitat types are found on Segment 6 (Section D.4.1.1):

- *Lepidospartum squamatum* Shrubland Alliance (Scalebroom Scrub) is found along the Whitewater River and several smaller washes.
- *Ericameria paniculata* Shrubland Alliance (Black-stem Rabbitbrush Scrub) is found in a small area near Devers Substation.
- Aeolian (wind-blown) sand habitat is found east of the Whitewater River and in the Whitewater River wash.

### ***Special-status Plants***

Five special-status plants were observed during surveys on Segment 6: chaparral sand verbena, Parry's spineflower, white-bracted spineflower, spiny-hair blazing star, and desert spike-moss. Three special-status species have a high potential to occur (Coachella Valley milk-vetch, triple-ribbed milk-vetch, and little San Bernardino Mountains linanthus), and three additional special-status plant species have a low potential to occur within Segment 6. See Table Ap.7-1 and Figures Ap.7-3a through Ap.7-3k, Special-status Species Observations (Appendix 7).

Coachella Valley milk-vetch has a high potential to occur in Segment 6. Suitable habitat is present, and there are numerous documented occurrences within 5 miles of the ROW (GANDA, 2011), including a documented occurrence along the ROW just west of Devers Substation (Aspen, 2006). This species was not observed during botanical surveys in 2012 and 2013 (BRC, 2013).

Triple-ribbed milk-vetch has a high potential to occur in Segment 6. There is suitable habitat present, and documented occurrences within 5 miles of the ROW (GANDA, 2011), including plants documented in or near the proposed ROW in the Whitewater River wash in 1995 (LSA, 2013b). The primary habitat for triple-ribbed milk-vetch is on upland slopes higher in the Whitewater River watershed, but it is occasionally found as isolated individuals ("waifs") in the Whitewater River wash. The ROW does not cross the main occurrences of triple-ribbed milk-vetch, but isolated plants could be found within some parts of the ROW. Triple-ribbed milk-vetch was not observed during botanical surveys in 2012 and 2013 (BRC, 2013).

### **D.4.1.3 Environmental Setting for Connected Actions**

Biological resources information on connected actions is derived from the Palen Solar Electric Generating System Draft Supplemental EIS (BLM, 2013); Desert Harvest Solar Farm Final EIS (BLM, 2012); Blythe Mesa Solar Project Draft EIR/EA (BLM and Riverside County, 2014); Presiding Member's Proposed Decision, Palen Solar Power Project (CEC, 2010); and the West of Devers Project PEA (SCE, 2013).

**Desert Center Area.** The Desert Center area, about 50 miles east of the Coachella Valley, also is within the Colorado subregion of the Sonoran Desert in Riverside County. Much of this area is at an elevation below 1,000 feet above mean sea level (amsl), with mountain peaks rarely exceeding 3,000 feet amsl.

Average annual rainfall is 3.68 inches (recorded at Eagle Mountain weather station), and a substantial portion of it falls during August and September, usually as brief and intense thunderstorms.

Land use in the area includes public lands and open space, scattered rural residential, and some active and inactive agricultural (jojoba) fields.

**Vegetation and habitat.** Common vegetation communities are Sonoran creosote bush scrub (described above) and saltbush scrub. Saltbush scrub is an open shrubland dominated by various species of saltbush (*Atriplex* spp.)

Examples of sensitive habitats or vegetation types in this area are aeolian sand (described in Section D.4.1.1), including active desert dunes and partially stabilized desert dunes, and desert dry wash woodland. Desert dry wash woodland is generally taller and denser than that of surrounding desert habitats. Typical species are desert ironwood (*Olneya tesota*), blue palo verde (*Parkinsonia floridum*), smoketree (*Psoralea argyrea*), and catclaw acacia (*Acacia greggii*).

**Special-status plants.** No listed threatened or endangered plants are reported from the Desert Center vicinity. Examples of non-listed special-status plants found in the area are chaparral sand-verbena (*Abronia villosa* var. *aurita*; CRPR 1B.1), Harwood's woollystar (*Eriastrum harwoodii*; CRPR 1B.2), and Crucifixion thorn.

**Wetlands and other waters.** There are numerous dry (episodic or ephemeral) washes and channels here. These washes rarely carry surface flow except during rainstorms or during floods originating from heavy precipitation higher in the watershed. As described in Section D.4.1.1, under the federal Clean Water Act and State Fish and Game Code, these channels may be subject to USACE, CDFW, SWRCB or RWQCB, and potentially EPA jurisdiction.

**Blythe Area.** The Blythe area, about 50 miles east of Desert Center, also is within the Colorado subregion of the Sonoran Desert in Riverside County. The area is a relatively flat valley, with elevations generally below 1,000 feet amsl. There are scattered small mountain ranges (Big Maria Mountains, McCoy Mountains, Mule Mountains, etc.), with most peaks below 3,000 feet amsl. The Colorado River is a few miles east of Blythe.

The climate consists of dry, mild winters and hot, dry summers. Average temperatures are 45 degrees Fahrenheit in winter and 104 degrees Fahrenheit in summer. Annual rainfall ranges between 2 and 10 inches. Most precipitation falls between November and March, but the region periodically experiences monsoonal summer storms.

The area is characterized by a small urban center (Blythe), public lands and open space, rural residential land, and extensive agriculture along the Colorado River (citrus, wheat, alfalfa, jojoba, etc.).

**Vegetation and habitat.** Common vegetation communities in the Blythe area are Sonoran creosote bush scrub (described above), desert dry wash woodland, and desert wash scrub.

Desert dry wash woodland is an example of a sensitive habitat. It is the same general vegetation community as described above for the Desert Center area, but in this area it may have a slightly different mix of species: honey mesquite, palo verde (*Cercidium floridum*), desert ironwood, and cat claw acacia.

**Special-status plants.** Examples of non-listed special-status plants found in the area are Harwood's woollystar, Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*; CRPR 2B.2), gravel milk-vetch (*Astragalus sabulorum*; CRPR 2.2) desert unicorn-plant, dwarf germander (*Teucrium cubense* ssp.

*depressum*; CRPR 2.2) and winged cryptantha (*Cryptantha holoptera*; CRPR 4.3). No listed threatened or endangered plants are reported from the Blythe vicinity.

**Wetlands and other waters.** The Colorado River is located east of Blythe. The river itself is considered waters of the state and waters of the U.S. Riparian and wetland vegetation, wash habitat, and irrigation or drainage canals along the river, its floodplain, and its tributary washes also may meet jurisdictional criteria. Further to the west, outside the agricultural areas, there are numerous dry (episodic or ephemeral) washes and channels. These washes rarely carry surface flow except during rainstorms or during floods originating from heavy precipitation higher in the watershed. As described in Section D.4.1.1, under the federal Clean Water Act and State Fish and Game Code, these channels may be subject to USACE, CDFW, SWRCB or RWQCB, and potentially EPA jurisdiction. Irrigation channels and stock ponds may be found within the agricultural areas; depending on the situation, these may also be jurisdictional.

## D.4.2 Applicable Regulations, Plans, and Standards

This section summarizes the key federal, state, and local regulations, plans, and standards applicable to this analysis of biological resources within the Proposed Project area.

### D.4.2.1 Federal

**Federal Land Policy and Management Act (43 U.S.C. Sections 1701-1787).** Directs management of public lands managed by the U.S. Forest Service, National Park Service, and BLM; addresses land use planning, rights-of-way, wilderness, and multiple use policies. In the California Desert, BLM administers multiple uses and resources, including biological resources, through its California Desert Conservation Area Plan and subsequent amendments.

**Endangered Species Act (16 USC Sections 1531-1543).** Establishes legal requirements for conservation of endangered and threatened species and the ecosystems upon which they depend. Administered by the U.S. Fish and Wildlife Service (USFWS). Under the Endangered Species Act (ESA), the USFWS may designate critical habitat for listed species. Section 7 of the ESA requires federal agencies to consult with USFWS to ensure that their actions are not likely to jeopardize listed threatened or endangered species, or cause destruction or adverse modification of critical habitat. Section 10 of the ESA requires similar consultation for non-federal applicants.

**Clean Water Act (33 USC Sections 1251-1376).** Regulates the chemical, physical, and biological integrity of the nation's waters. Section 401 of the Clean Water Act (CWA) requires that an applicant obtain State certification for discharge into waters of the United States. The State Water Resources Control Board and Regional Water Quality Control Boards administer the certification program in California, and the U.S. Environmental Protection Agency (EPA) administers the certification program on sovereign tribal land. Section 404 of the CWA establishes a permit program, administered by the U.S. Army Corps of Engineers (USACE), to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Individual projects may qualify under "Nationwide General Permits," or may require project-specific "Individual Permits."

**Noxious Weed Act (7 USC Sections 2801 et seq.).** Provides for the control and management of non-indigenous weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health. The Secretary of Agriculture may designate plants as noxious weeds, and take measures to prevent the spread of such weeds.

**Fish and Wildlife Coordination Act (16 USC Sections 661 666).** Applies to any federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified. Requires consultation among USFWS and state wildlife agency. Implemented through the NEPA process and Section 404 permit process.

**Executive Order 11990, Protection of Wetlands.** Directs federal agencies to avoid to the extent possible the long- and short-term adverse impacts from the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

**Executive Order 13112, Invasive Species.** Establishes the National Invasive Species Council and directs federal agencies to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts caused by invasive species.

### **D.4.2.2 State**

**California Endangered Species Act (Fish and Game Code Section 2050 et seq.).** Prohibits take of state-listed threatened or endangered species, except as authorized by the California Department of Fish and Wildlife (CDFW). Authorization may be issued as an Incidental Take Permit or, for species listed under both the California Endangered Species Act (CESA) and the federal ESA, through a Consistency Determination with the federal incidental take authorization.

**Natural Community Conservation Planning Act (Fish and Game Code Section 2800 et seq.).** Provides a regional approach to conservation. Natural Community Conservation Plans (NCCPs) are developed and implemented by CDFW in cooperation with private and public partners, to protect species and their habitats while allowing for compatible and appropriate economic activity. Portions of the Proposed Project Area lie within two NCCP areas, the Western Riverside Multiple Species Conservation Plan (WR-MSHCP) and the Coachella Valley MSHCP (CV-MSHCP); see Section D.4.2.3.

**Lake and Streambed Alteration Agreements (Fish and Game Code Section 1600-1616).** The CDFW regulates projects that would divert, obstruct, or change the natural flow, bed, channel, or bank of a river, stream, or lake. Regulation is formalized in a Lake and Streambed Alteration Agreement (LSAA), which generally includes measures to protect any fish or wildlife resources that may be substantially affected by the project.

**Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.).** Regulates surface water and groundwater and assigns responsibility for implementing federal CWA Section 401. Establishes the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) to protect State waters. The Proposed Project Area lies within watersheds regulated by two RWQCBs: the Santa Ana and Colorado River RWQCBs. If a project extends into multiple RWQCB boundaries, it is subject to regulation by the SWRCB.

### **D.4.2.3 Local**

**Western Riverside Multiple Species Habitat Conservation Plan.** Provides long-term conservation for “covered” special-status plants and animals; provides CESA and ESA take of covered species for conforming projects, subject to the Plan’s administrative and mitigation requirements, and USFWS and CDFW take authorizations.

**Coachella Valley Multiple Species Habitat Conservation Plan.** Provides long-term conservation for “covered” special-status plants and animals; provides CESA and ESA take of covered species for conforming projects, subject to the Plan’s administrative and mitigation requirements, and USFWS and CDFW take authorizations.

**City and County Land Use Planning.** Riverside and San Bernardino Counties, and several incorporated cities on the ROW, include biological resources policies in adopted general plans or local ordinances. These policies are listed in Table 4.4-1 of the Proponent's Environmental Assessment (PEA).

### **D.4.3 Environmental Impacts of the Proposed Project**

The objective of the impact analysis is to identify, describe, and (where feasible) quantify the Proposed Project's expected impacts to vegetation resources. This impact analysis is based on the vegetation resources described in the Environmental Setting / Affected Environment section above and on the Description of the Proposed Project in Section B. This analysis incorporates PEA Section 4.4.5, Impacts Analysis, as well as independent review and analysis of the Proposed Project's expected impacts to each resource.

Section D.4.3.1 describes the approach to quantifying vegetation resources impacts, wherever feasible, or describes other metrics or approaches which may be used in comparison of impacts among alternatives. Section D.4.3.2 lists the impact criteria for evaluation of each impact. Section D.4.3.3 (Impact Analysis and Mitigation Measures), describes the Proposed Project's expected direct and indirect effects to vegetation resources. In addition, it specifies mitigation measures as feasible to reduce these impacts.

#### **D.4.3.1 Approach to Impact Assessment**

The Proposed Project includes a construction phase, projected to take place over approximately 36 to 48 months. Following construction, temporary disturbance areas would be revegetated according to applicable mitigation measures. Revegetation efforts, along with implementation and monitoring of other mitigation measures identified herein, would necessitate ongoing vehicle access and soil disturbance beyond the completion of construction. This phase is referred to as the Proposed Project's "restoration" phase in the following analysis.

Additionally, vehicle access and other project activities would continue during operation and maintenance (O&M), throughout the life of the Proposed Project. Each potential impact to vegetation is described, to indicate whether it is a direct or indirect impact; whether its effects would be permanent, long-term or short-term; and whether it would occur during one or more of the Proposed Project's phases, including construction, restoration, or O&M.

Direct impacts are the direct or immediate effects of the Proposed Project on vegetation resources. Examples of direct impacts include mortality or injury, or displacement of special-status plants; loss or degradation of native vegetation and habitat; and disturbance to plants and habitat from dust. Indirect impacts are those effects that are caused by or will result from the Proposed Project, later in time or farther removed in distance, but are still reasonably certain to occur. Examples of indirect effects to native habitat and vegetation include erosion, sedimentation, and introduction of invasive species that may compete with native species and cause habitat degradation.

The project route traverses lands within two different Multiple Species Habitat Conservation Plans (MSHCPs). It also crosses Morongo Tribal land and portions of San Bernardino County that are not within either MSHCP area. In addition, it crosses BLM land within the Coachella Valley MSHCP (CV-MSHCP) area, but not covered by USFWS and CDFW take authorization for the CV-MSHCP. SCE intends to participate in both MSHCPs as a Participating Special Entity (PSE) but the PSE application process is not yet complete. This analysis indicates whether direct or indirect impacts would occur in each of the jurisdictional areas. Where mitigation is identified, the analysis indicates whether each measure would be applicable within

each jurisdictional area, based in part on whether MSHCP participation would mitigate the impact independently from mitigation measures identified herein.

Some of the Proposed Project's impacts to vegetation can be quantified in terms of acreage (e.g., acreage of vegetation or habitat that would be affected by the project). Other impacts (e.g., adverse effects of dust to plants and vegetation) cannot be directly quantified, but acreage is often the best available estimator of expected disturbance for comparison purposes. Wherever feasible, the analysis indicates acreage as the best available metric for each anticipated impact.

#### D.4.3.1.1 Applicant Proposed Measures

The PEA includes a series of Applicant Proposed Measures (APMs) proposed by SCE to reduce or avoid impacts to biological resources. The APMs are considered to be commitments made by SCE, and they are assumed to be implemented in this evaluation of impacts to biological resources. SCE's APMs addressing vegetation and special-status plants are presented in Table D.4-3. APMs that relate strictly to wildlife are presented in Section D.5. The additional mitigation measures recommended in this analysis generally incorporate the APMs, while adding conditions or details as needed to mitigate potential impacts. Therefore, the APMs in Table D.4-3 are superseded by mitigation measures provided.

**Table D.4-3. Applicant Proposed Measures – Biological Resources**

| APM       | Text   |
|-----------|--|
| APM BIO-1 | <p><b>Revegetation Plan.</b> [Note: This revision of APM BIO-1 was provided by SCE in response to CPUC PEA Completeness Review Data Request. P. Nevins, December 6, 2013.]</p> <p>Prior to starting construction, a draft revegetation plan would be prepared to guide the revegetation of those areas subject to temporary project impacts during construction and that are not included within either the WR-MSHCP or CV-MSHCP (e.g., land areas within the Morongo Reservation or San Bernardino County), and where dominant land cover consists of native vegetation. The objective of revegetation would be to re-establish vegetation back to pre-construction conditions (e.g., by maintaining roughly equivalent or comparable native to non-native dominance patterns) with consideration of adjacent community composition.</p> <p>Areas dominated primarily by non-native vegetation and that are temporarily disturbed by construction activities may also be revegetated; however, the primary objective for those areas would be to stabilize soils to minimize erosion potential in accordance with any applicable SWPPP requirements.</p> <p>Prior to completing construction activities, the revegetation plan would be finalized to address site-specific conditions, methodology and technique, implementation schedule, monitoring and maintenance, and success criteria.</p> <p>The revegetation plan would also direct revegetation of temporarily impacted native-dominated vegetation areas located in the WR-MSHCP and the CV-MSHCP plan areas consistent with MSHCP standards and pursuant to any agreements negotiated between SCE and the MSHCP management entities (e.g., RCA [Regional Conservation Authority] and CVCC [Coachella Valley Conservation Commission]) regarding SCE's obligations as a PSE receiving coverage for impacts to various resources. If SCE does not gain PSE status under either MSHCP, the draft revegetation plan to re-establish native-dominated vegetation back to pre-construction conditions (as noted above) would include native dominated areas within MSHCP areas also. The draft revegetation plan would be submitted to the CPUC, BLM, and applicable wildlife agencies for approval after completion of final engineering and prior to the start of construction.</p> <p>The Revegetation Plan will include the following elements:</p> <p>(a) A statement of revegetation goals for different areas within the project (e.g., to mitigate project impacts to specific resources) based on the administrative land jurisdiction particular areas fall in and also based on the different vegetation types and the constituent elements therein. In particular, revegetation objectives for areas supporting native vegetation may differ substantially from the objectives for revegetation in other areas. Revegetation objectives will be specified for different habitat and vegetation types and for the following administrative areas: 1) San Bernardino County, including specific reference to goals for revegetation within USFWS-designated Critical Habitat for California gnatcatcher and areas deemed occupied by Stephens' kangaroo rat; 2) WRC MSHCP areas, including Public/Quasi-Public conservation areas and Additional Reserve Lands; 3) CVMSHCP areas; and 4) areas to be re-</p> |



**Table D.4-3. Applicant Proposed Measures – Biological Resources**

| APM       | Text  |
|-----------|---|
|           | <p>vegetated on land within the Morongo Reservation. Examples of likely goals may include preventing or minimizing further site degradation; stabilizing soils; promoting passive vegetation recovery over time; replacing degraded natural vegetation and habitat value with equivalent vegetation cover and composition as compared to pre-construction conditions; and minimizing soil erosion, dust generation, and weed invasions.</p> <p>(b) Quantitative success criteria. Because restoration goals will differ according to location, success criteria shall be tailored appropriately to areas in different administrative jurisdictions (please see above) and will also be defined specifically for areas containing habitat for listed species and other special-status species for which habitat value is being replaced along the route.</p> <p>(c) Implementation. The Plan will describe SCE's proposed implementation measures, including: (a) pre-construction characterization of specific areas subject to temporary construction impacts; (b) soil preparation measures, including locations of recontouring, decompacting, soil amendments, imprinting, or other treatments; (c) details for top soil salvage and storage, as applicable; (d) plant material collection and acquisition guidelines, including guidelines for obtaining plants or seed from vendors; (e) scheduling and methods for planting or seeding; (f) proposed irrigation methods.</p> <p>(d) Maintenance. The Plan will include scheduling and methods for proposed maintenance activities such as weeding, trash removal, etc.</p> <p>(e) Monitoring and Reporting. The Restoration Plan will include a detailed monitoring and reporting program, commensurate with the goals and success criteria for each revegetation site. The monitoring and reporting program will be designed to evaluate progress toward success criteria at appropriate milestones, provide an objective determination whether each site meets success criteria at the end of the monitoring period, and report this information to the relevant agencies.</p> <p>(f) Contingency. The Plan will include contingency measures for implementation if revegetation efforts make insufficient progress toward success criteria at specified milestones.</p> |
| APM BIO-2 | <p><b>Biological Monitoring.</b> Where special-status species (e.g., reptiles, birds, mammals, and bat roosts) or unique resources (defined by regulations and local conservation plans) are known to occur, biologists would monitor construction activities, unless otherwise mitigated for or as appropriate actions are described in species-specific APMs.</p>   |
| APM BIO-7 | <p><b>Special Status Plants.</b> Pre-construction surveys for plant species assigned a State Rare Plant Rank of 1B would be performed during the appropriate season and observed populations compared to impact area limits associated with final design. If substantial adverse impacts to a population are unavoidable then replacement or translocation of equivalent numbers of plants would be planned and implemented. (Substantially adverse impacts are defined as damage or loss of at least 20 percent of the total number of individuals in a local population within the Project Area or 20 percent of the total area occupied by a population of special status plants. Potential impacts to species ranked 2 or 4 would not be considered significant but may still be avoided to the extent practicable).</p> <p>Special status plants designated on List 1B that are substantially adversely affected would be salvaged and relocated. SCE will prepare plan to accomplish salvage and relocation/replacement plan that states methods of salvage, storage, and replacement planting of seeds or plants, and to identify receptor sites, set target numbers to be established, describe monitoring methods, and define requirements for maintenance and annual monitoring reports.</p> <p>List 1B species observed in project area include: Yucaipa onion, smooth tarplant, Parry's spineflower, white-bracted spineflower, and chaparral sand verben.</p>  |
| APM BIO-8 | <p><b>Coachella Valley Milk-vetch.</b> Focused surveys for Coachella Valley milk-vetch would be conducted during the appropriate season within designated Critical Habitat along the Whitewater River during the season immediately preceding proposed construction activities in that area.</p> <p>This species was not found during focused surveys conducted in 2011 and 2012. If this species is located and occurs within areas potentially subject to impacts during construction, a plan to avoid impacts, protect specimens in place, and/or salvage and replace affected specimens would be developed in consultation with the CVCC, USFWS, and CDFW.</p>  |

**Table D.4-3. Applicant Proposed Measures – Biological Resources**

| APM                    | Text   |
|------------------------|--|
| APM BIO-9 <sup>2</sup> | <p><b>Jurisdictional Water Permits.</b> Jurisdictional waters permits would be obtained from CDFW under Cal. Fish &amp; Game Code Section 1602, and from USACE, EPA, and SWRCB, in accordance with Sections 404 and 401 of the Clean Water Act, to address unavoidable impacts to State and Federal jurisdictional waters. Impacts would be mitigated based on the terms of the permits.</p> <p>The applicant would develop a Habitat Mitigation and Monitoring Plan (HMMP) for affected jurisdictional areas within established riparian areas, as needed, for review and approval by the USACE, CDFW, the EPA, and the SWRCB, as appropriate. The plan would describe measures to accomplish restoration or revegetation, provide criteria for success, and specify compensation ratios. Monitoring and reporting requirements and the duration of post-construction monitoring would be specified. A copy of the final HMMP would be provided to the CPUC, USACE, EPA, SWRCB, and CDFW.</p> <p>Regarding any affected Riparian/Riverine drainages and habitat areas in Segments 3 and 4 in Western Riverside County, if SCE participates in the WR-MSHCP, SCE would prepare a DBESP [Determination of Biologically Equivalent or Superior Preservation] that would include mitigation measures consistent with the HMMP as previously described. The RCA would request USFWS and CDFW concurrence with the MSHCP “findings of consistency,” as well as DBESP approval. Subsequent coordination on any biological issues would be addressed through consultation with the RCA. The RCA would determine the need for additional consultation with the USFWS and CDFW.</p> |
| APM BIO-13             | <p>In areas where foot travel is necessary outside of already identified temporary or permanent disturbance areas Biological Monitors present in areas as required by APM BIO-2, would assist construction crews in determining the most appropriate foot path having the least potential to disturb sensitive biological resources.</p>   |

### D.4.3.2 Impact Criteria

NEPA does not have specific significance criteria. However, NEPA regulations contain guidance regarding significance analysis. Specifically, consideration of “significance” involves an analysis of both context and intensity (Title 40 Code of Federal Regulations 1508.27). Using the following criteria for the purposes of analysis, the project or an alternative would impact vegetation resources if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404, of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

<sup>2</sup> Minor revisions were made to APM BIO-9 per SCE’s request dated September 22, 2015.

### D.4.3.3 Impacts and Mitigation Measures

This section describes the Proposed Project's expected direct and indirect impacts to vegetation resources and identifies mitigation measures to avoid, minimize, rectify, reduce over time, or compensate for those impacts. The analysis considers all project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and staging yards. The mitigation measures identified in this analysis are designed to incorporate and supplement the APMs (Table D.4-3). If any part of a mitigation measure is found to be in conflict with an APM, the mitigation measure will supersede. In the case of Biological Resources-Vegetation, the BIO APMs have been superseded by mitigation measures.

Several of the impacts to vegetation resources also apply to wildlife resources. This is especially true of habitat-related impacts (e.g., vegetation removal). In addition, several of the mitigation measures for vegetation resources identified below will also serve to mitigate wildlife resources impacts. For example, biological monitoring is described in Mitigation Measure VEG-1a (Conduct biological monitoring and reporting), and worker training is described in Mitigation Measure VEG-1b (Prepare and implement worker environmental awareness program). These and other mitigation measures include components to mitigate or avoid project impacts to both vegetation and wildlife resources, supporting the analysis and conclusions found in this section and in the Wildlife Resources section (Section D.5.3.3).

The following definitions (Barbour et al., 1987) are provided to assist the reader:

- Absolute cover is the percentage of a sampling area that is underneath the canopy of, or covered by, vegetation. The term "cover" without any additional descriptors generally refers to absolute cover. Absolute cover of vegetation may total less than 100 percent if there are unvegetated areas, or may total more than 100 percent if plant canopies overlap.
- Relative cover is the cover of a particular species, type, or group of plants as a percentage of total plant cover. Relative cover will always total 100 percent, regardless of the total absolute cover. For example, if a sampling plot has total absolute cover of 45 percent of Species A and 15 percent of Species B, with no other species present, total absolute cover is 60 percent (45+15). Relative cover of Species A is 75 percent (absolute cover of Species A divided by total absolute cover or 45/60) and relative cover of Species B is 25 percent (absolute cover of Species A divided by total absolute cover or 15/60).
- Density is the number of individual plants per unit area, often expressed as number of plants per acre.

***Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats***

Road construction and improvements, and site preparation for transmission structure demolition or construction, pull sites, staging areas, equipment yards, parking areas, administrative functions, and other project activities would necessitate removing existing vegetation and habitat. This impact would be relatively minor for vegetation and habitat removal in areas with little native habitat value (e.g., areas in industrial or agricultural use, or heavily disturbed and ruderal areas). In other areas, loss of native vegetation would reduce or degrade habitat availability for native plants and wildlife, including special-status species. In some cases, sensitive habitats or vegetation types, or habitats that support listed threatened or endangered species or other special-status species, would be removed. Even grasslands and forb lands that are predominantly covered by non-native grasses and herbs are important foraging habitat for

raptors and other predators, and may support special-status or listed threatened or endangered species, such as Stephens' kangaroo rat.

Adverse effects to vegetation and habitat would occur primarily during project construction. These effects may be temporary or permanent. Permanent impacts would preclude most natural vegetation and habitat function throughout the life of the Proposed Project, or longer. Examples of permanent impacts are removal of vegetation for permanent roads and access areas at each structure.

Unauthorized public access to project roads or work areas could lead to impacts to native habitat, special-status species, or jurisdictional waters through trash dumping, target shooting, off-highway vehicle use, and other activities. Unauthorized public access associated with the Proposed Project is expected to be similar to that of the existing West of Devers system and impacts would be similar to existing conditions, provided that similar control of access (i.e., closure of gates) is implemented.

Temporary impacts to vegetation and habitat would occur during construction, where vegetation is removed for temporary work areas, without long-term land use conversion, so that vegetation may return to a more natural condition or may be actively revegetated or enhanced. Temporary impacts include vegetation removal for staging areas, or cut or fill slopes. However, depending on the nature of disturbance and local climate (particularly deserts), characterization of permanent and temporary impacts must reflect slow vegetation recovery rates. Natural recovery rates vary according to the vegetation type and the nature and severity of the impact. For example, some vegetation may recover naturally within a few years after crushing by heavy vehicles (Gibson et al., 2004), whereas more severe damage involving vegetation removal and soil disturbance can take from 50 to 300 years for partial recovery, and complete ecosystem recovery may require over 3,000 years (Lovich and Bainbridge, 1999). In cases where ecological restoration techniques cannot dependably restore habitat values within a five (5) year period, impacts will be considered permanent for this analysis.

The bulk of vegetation and habitat removal would occur during project construction. Similar, but limited, impacts may also occur during post-construction restoration (e.g., post-construction recontouring; weed removal; or grading, soil decompaction, or other site preparation for revegetation).

Some vegetation and habitat removal would continue through the O&M phase, but these effects would be limited to maintenance of access areas or other permanent disturbance areas. Operations activities would involve periodic inspections of all project facilities at least once per year. Maintenance could include repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and structures, tree trimming, brush and weed control, and access road maintenance. Most regular O&M activities of overhead facilities are performed from access roads with no surface disturbance. Repairs, such as repairing or replacing poles and structures, could occur in undisturbed areas. O&M activities associated with the Proposed Project are expected to be less than or equivalent to O&M of the existing West of Devers system and impacts would be similar to or reduced from existing conditions.

Table D.4-4 summarizes SCE's estimates of the acreage to be removed, by vegetation type and permanent or temporary impacts, based on preliminary engineering. These acreages are regarded as "worst case" estimates of total vegetation and habitat removal. Total acreages are expected to be reduced during ongoing refinement of the Proposed Project design (i.e., site-specific locations and cut or fill areas for each structure and access route). The expected disturbance acreage cannot be quantified until completion of final engineering. Therefore, this analysis conservatively uses data provided in the PEA (Tables 4.4-8 and 4.4-9), given that project impacts may be less, but under no circumstances, will be more than analyzed here.

Where vegetation and habitat have no special conservation status (i.e., no potential to support special-status plants or animals, not a wetland or riparian habitat, and not designated by CDFW (CDFG, 2010) as a “community with highest inventory priority,” the impact can be mitigated through engineering, monitoring, and verification to minimize direct project impacts, followed by revegetation of temporarily disturbed areas to minimize weed invasion, dust generation, and erosion. Within the Proposed Project area, vegetation and land use areas mapped as agriculture and developed/disturbed (as shown in Table D.4-4) meet these criteria. In addition, most of the mapped grassland/forbland vegetation is expected to recover most of its habitat structure and value through revegetation that would minimize weed invasion, dust generation, and erosion. No compensation or additional mitigation would be required for permanently disturbed acreage in these vegetation or habitat types. Two exceptions are grassland/forbland areas supporting Stephens’ kangaroo rat or with 10 percent or greater relative cover of native perennial grass species, which are addressed below.

The Applicant proposes to revegetate temporarily impacted areas according to APM BIO-1, Revegetation Plan, and to monitor construction activities at work sites where special-status species or unique resources are present according to APM BIO-2, Biological Monitoring (see Table D.4-3). These APMs are superseded by Mitigation Measures VEG-1a and VEG-1b. Mitigation Measures VEG-1a through VEG-1d would apply to all vegetation types affected by the Proposed Project. These measures are briefly described here, and set forth in detail below.

- Mitigation Measure VEG-1a (Conduct biological monitoring and reporting) would require SCE to assign qualified biologists to monitor and report on construction activities and compliance with multiple resource protection requirements specified in adopted mitigation measures, including limiting vegetation and habitat disturbance to the permitted construction area boundaries.
- Mitigation Measure VEG-1b (Prepare and implement worker environmental awareness program [WEAP]) would require the Applicant to ensure that project workers are informed of resource protection requirements, including permitted limits of disturbance.
- Mitigation Measure VEG-1c (Minimize native vegetation and habitat loss) would require SCE to minimize vegetation loss to the extent feasible through project design, and clearly demarcate authorized work and disturbance areas in the field.
- Mitigation Measure VEG-1d (Restore or revegetate temporary disturbance areas) would require SCE to restore or revegetate areas where vegetation and habitat are temporarily removed. For temporary disturbances in areas mapped as agriculture, developed/disturbed, and most grassland/forbland, restoration or revegetation will be designed to minimize weed invasion, dust generation, and erosion.

The Proposed Project also would affect wetland or riparian habitat, vegetation and habitat that may support special-status plants or animals, and vegetation types designated by CDFW (CDFG, 2010) as “communities with highest inventory priority.” These vegetation communities and habitat types include alluvial scrub, coast live oak woodland, coastal sage scrub, chaparral, desert scrub, riparian woodland, aeolian sand, and grassland/forbland potentially supporting Stephens’ kangaroo rat, or native grasslands (i.e., grassland/forbland with 10 percent or greater relative cover of native perennial grasses). Where the Proposed Project would remove these vegetation or habitat types, the permanent or temporary loss would necessitate additional mitigation to replace habitat values, through revegetation, restoration, or off-site compensation. In these areas, Mitigation Measures VEG-1a through VEG-1d would apply as stated above. Additionally, Mitigation Measure VEG-1d would require more complete revegetation or restoration of temporarily disturbed areas, and Mitigation Measure VEG-1e (Compensate for permanent habitat loss) would require off-site compensation for permanent and long-term loss of these vegetation and habitat types.

- Mitigation Measure VEG-1d (above).
- Mitigation Measure VEG-1e (Compensate for permanent habitat loss) would require SCE to offset permanent habitat loss by acquiring and protecting replacement habitat of equivalent or higher habitat value at the ratios prescribed by VEG-1e (below) in perpetuity.

***Mitigation Measures for Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats.***

**VEG-1a Conduct biological monitoring and reporting.** The following provisions shall apply to the approved project during the construction and post-construction restoration phases.

**Lead biologist:** SCE shall designate a lead biologist and submit the individual's resume to the CPUC and BLM for concurrence, no less than 60 days prior to the start of any ground-disturbing activities, including those occurring prior to site mobilization (including, but not limited to geotechnical borings or hazardous waste evaluations). At minimum the lead biologist will hold a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; have at least three years of experience in field biology and at least one year of direct field experience with biological resources found in or near the project area, *OR* relevant education and experience that demonstrates the ability to carry out the tasks required of a lead biologist. The resume shall demonstrate to the satisfaction of the CPUC and BLM the appropriate education and experience to accomplish the assigned biological resources tasks. The lead biologist will be SCE's primary point of contact to CPUC, BLM, CDFW, and USFWS regarding any biological resources issues and implementation of related mitigation measures and permit conditions throughout project construction and post-construction restoration work. In addition, the lead biologist will oversee supervision and training of biological monitors (below) and preparation and submission of all monitoring reports and notifications (below).

If the lead biologist is replaced, the specified information of the proposed replacement must be submitted to the CPUC and BLM at least ten working days prior to the termination or release of the preceding lead biologist. In an emergency, SCE shall immediately notify the CPUC and BLM to discuss the qualifications and approval of a short-term replacement while a permanent lead biologist is proposed for consideration.

**Biological monitors:** SCE shall assign qualified biological monitors to the project to monitor all work activities during the construction phase.

Monitors are responsible for ensuring that impacts to special-status species, native vegetation, wildlife habitat, and sensitive or unique biological resources are avoided or minimized to the fullest extent safely possible. Monitors are also responsible to ensure that work activities are conducted in compliance with APMs, mitigation measures, permit conditions, and other project requirements.

Resumes of all biological monitors, including specialty monitors (including but not limited to bat, nesting bird, and special-status species monitors), shall be provided for concurrence by the CPUC and BLM, at least 15 working days prior to the monitor commencing field duties. The resumes shall demonstrate, to the satisfaction of the CPUC and BLM, the appropriate education and experience to accomplish the assigned biological resources tasks.

**Table D.4-4. Maximum Potential Permanent and Temporary Vegetation Removal**

| Segment                          | Agriculture | Alluvial Scrub | Chaparral | Coast Live Oak Woodland | Coastal Sage Scrub | Desert scrub | Developed/ Disturbed | Grassland/ Forbland | Riparian Woodland | Open Water | Aeolian* Sand | Total  |
|----------------------------------|-------------|----------------|-----------|-------------------------|--------------------|--------------|----------------------|---------------------|-------------------|------------|---------------|--------|
| <b>Permanent Impacts (acres)</b> |             |                |           |                         |                    |              |                      |                     |                   |            |               |        |
| 1                                | 4.9         | —              | 0.3       | —                       | 1.2                | —            | 21.1                 | 4.8                 | —                 | —          | —             | 32.3   |
| 2                                | 0.2         | 0.1            | —         | —                       | 12.3               | —            | 5.9                  | 18.2                | —                 | —          | —             | 36.7   |
| 3                                | 1.7         | 0.8            | 13.0      | —                       | 59.1               | —            | 6.4                  | 50.6                | 0.0               | —          | —             | 131.7  |
| 4                                | 2.7         | —              | 21.5      | 1.6                     | 2.5                | —            | 12.4                 | 22.9                | 2.5               | —          | —             | 66.1   |
| 5                                | —           | 5.2            | —         | —                       | 4.1                | 26.4         | 9.3                  | 2.6                 | —                 | —          | —             | 47.7   |
| 6                                | —           | 2.0            | —         | —                       | —                  | 61.7         | 4.2                  | —                   | —                 | —          | 5.1           | 67.9   |
| <b>Subtotal</b>                  | 9.6         | 8.1            | 34.8      | 1.6                     | 79.3               | 78.1         | 59.3                 | 99.0                | 2.5               | —          | 5.1           | 372.5  |
| <b>Temporary Impacts (acres)</b> |             |                |           |                         |                    |              |                      |                     |                   |            |               |        |
| 1                                | 32.7        | —              | 1.1       | —                       | 5.1                | —            | 168.4                | 26.8                | 0.6               | —          | —             | 234.6  |
| 2                                | 4.2         | 2.3            | —         | —                       | 92.7               | —            | 52.2                 | 130.3               | 0.8               | —          | —             | 282.4  |
| 3                                | 8.4         | 1.3            | 49.4      | —                       | 291.9              | —            | 78.2                 | 259.0               | 2.6               | 0.2        | —             | 688.0  |
| 4                                | 30.0        | 1.9            | 158.9     | 13.1                    | 27.3               | 6.6          | 222.4                | 265.2               | 16.6              | —          | —             | 741.9  |
| 5                                | —           | 62.3           | —         | —                       | 36.6               | 401.1        | 85.7                 | 34.0                | 1.7               | —          | —             | 621.5  |
| 6                                | —           | 17.2           | —         | —                       | —                  | 498.2        | 59.4                 | —                   | —                 | —          | 49            | 574.9  |
| <b>Subtotal</b>                  | 108.7       | 85.0           | 209.5     | 13.1                    | 453.5              | 905.9        | 666.9                | 715.3               | 22.2              | 0.2        | 49            | 3180.2 |

\*The area of aeolian sand habitat is occupied by desert scrub and included in the acreage for that community. The acreage for aeolian sand is therefore not added to the total.

Prior to monitors commencing field duties, SCE shall provide specific task training to biological monitors, in addition to general WEAP (see Mitigation Measure VEG-1b) training, which addresses the biological resources present or potentially present on the Proposed Project, as well as mitigation measures, permit requirements, project protocols, and the duties and responsibilities of a biological monitor.

Biological monitors shall inform construction crews daily of the location of any environmentally sensitive areas (ESAs), nest buffers, or other resource issues or restrictions that affect the work sites for that day. Biological monitors shall communicate with construction supervisors and crews as needed (e.g., at daily tailgate safety meetings (“tailboards”), by telephone, text message, or email) to provide guidance to maintain compliance with mitigation measures and permit conditions. SCE shall ensure that adequate numbers of monitors are assigned to effectively monitor work activities and that communications from biological monitors are promptly directed to crews at each work site for incorporation into daily work activities. If biological monitors are unavailable for a tailboard meeting, the construction supervisors shall communicate the location of all ESA, nest buffers, or other resource restrictions to crews during the meeting. SCE shall ensure that biological monitors are provided with an accurate daily construction work schedule as well as updated information on any alterations to the daily construction work schedule. This information shall also be provided to CPUC monitors. SCE shall ensure that biological monitors are provided with up-to-date biological resource maps and construction maps in hardcopy or digital format. These maps shall also be provided to CPUC monitors.

Monitors shall be familiar with the biological resources present or potentially present, ESAs, nest buffers, and any other resource issues at the site(s) they are monitoring, as well as the applicable mitigation measures and permit requirements. Monitors shall exhibit diligence in their monitoring duties and refrain from any conduct or potential conflict of interest that may compromise their ability to effectively carry out their monitoring duties.

**Biological monitor duties and responsibilities:** Throughout the duration of construction, SCE shall conduct biological monitoring of all activities in any area where there is a potential to impact sensitive biological resources or jurisdictional waters, including but not limited to vegetation removal/trimming/disturbance, all ground-disturbing work activities, and initial “drive and crush” in the project area, including work sites, yards, staging areas, access roads, and any area subject to project disturbance. Pre-construction activities (e.g., for geotechnical borings, hazardous waste evaluations, etc.) and post-construction restoration shall also be monitored by a biological monitor during all such activities.

Each day, prior to work activities at each site, the biological monitor(s) shall conduct clearance surveys (“sweeps”) for sensitive plant or wildlife resources that may be located within or adjacent to the construction areas. If sensitive resources are found, the biological monitor(s) shall take appropriate action as defined in all adopted mitigation measures, APMs, and permit conditions. Work activities shall not commence at any work site until the clearance survey has been completed and the biological monitor communicates to the contractor that work may begin.

Biological monitors shall clearly mark sensitive biological resource areas with staking, flagging, or other appropriate materials that are readily visible and durable. The monitors will inform work crews of these areas and the requirements for avoidance, and will inspect these areas at appropriate intervals for compliance with regulatory terms and conditions. The biological



monitors shall ensure that work activities are contained within approved disturbance area boundaries at all times.

Biological monitors shall have the authority and responsibility to halt any project activities that are not in compliance with applicable mitigation measures, APMs, permit conditions, or other project requirements, or will have an unauthorized adverse effect on biological resources.

Handling, relocation, release from entrapment, or other interaction with wildlife shall be performed consistent with mitigation measures, safety protocols, permits (including CDFW and USFWS permits), and other project requirements.

Biological monitors shall, to the extent safe, practicable, and consistent with mitigation measures and permit conditions, actively or passively relocate wildlife out of harm's way. On a daily basis, biological monitors shall inspect construction areas where animals may have become trapped, including equipment covered with bird exclusion netting, and release any trapped animals. Daily inspections shall also include areas with high vehicle activity (e.g., yards, staging areas), to locate animals in harm's way and relocate them if necessary. If safety or other considerations prevent biological monitors from aiding trapped wildlife or moving wildlife from harm's way, SCE shall consult with the construction contractor, CDFW, wildlife rehabilitator, or other appropriate party to obtain aid for the animal, consistent with Mitigation Measure WIL-1b (Ensure wildlife impact avoidance and minimization) (See Section D.5.3.3 (Biological Resources-Wildlife, Impacts and Mitigation Measures) for full text).

At the end of each work day, biological monitors shall verify that excavations, open tanks, and trenches have been covered or have ramps installed to prevent wildlife entrapment and communicate with work crews to ensure these structures are installed and functioning properly.

Biological monitors shall regularly inspect any wildlife exclusion fencing daily to ensure that it remains intact and functional. Any need for repairs to exclusion fencing shall be immediately communicated to the responsible party, and repairs shall be carried out in a timely manner, generally within one work day.

**Reporting:** SCE shall prepare and implement a procedure for communication among biological monitors and construction crews, to ensure timely notification (i.e., daily or sooner, as needed) to crews of any resource issues or restrictions. SCE will notify the CPUC and BLM of the procedure and will maintain records of daily communication. SCE will provide CPUC and BLM on-line access to project resource management maps and GIS data.

Monitoring activities shall be thoroughly and accurately documented on a daily basis. SCE shall prepare and submit daily, weekly, and annual, and final monitoring reports to the CPUC and BLM. Prior to the start of monitoring activities, SCE shall provide proposed report formats, describing content and organization, for CPUC and BLM review and approval in consultation with CDFW and USFWS. Report contents shall be as follows:

■ **Daily reports:**

- All daily special status species observations, including location of observation, location and description of project activities in the vicinity, and any avoidance or other measures taken to avoid the species. In addition, all special-status species observations shall be reported to the CNDDDB (California Natural Diversity Database; see Weekly reports).
- All non-compliance incident reports, including nest buffer incursions (see Mitigation Measure WIL-1c (Prepare and implement a Nesting Bird Management Plan)).
- Daily project activity plans, specifying each work site.

■ **Weekly reports:**

- Copies of all CNDDDB records for the preceding week and any additional reporting information for each species report (see Mitigation Measures WIL-2a through WIL-2k).

Weekly update of bird nesting activities and buffer distances (see Mitigation Measure WIL-1c).

■ **Annual reports:** SCE shall submit an annual monitoring report by January 30 of each calendar year, with the following contents:

- A summary of all compliance monitoring reports submitted throughout the calendar year;
- A summary of all non-compliance records occurring during the calendar year, and remedial actions applied for each one, with additional explanatory text and explanation of resolution of each substantial non-compliance incident (often termed “Level 3 non-compliance”);
- A summary of all nest buffer incursions, including helicopter incursions, (see Mitigation Measure WIL-1c), with explanation of follow-up actions and resolution for each one;
- Running annual compilations of permanent and temporary impact acreages by vegetation or habitat type and land use jurisdiction;
- Summaries of all other monitoring reporting requirements, as specified in mitigation measures in the Vegetation and Wildlife Resources sections; and
- Discussion of “lessons learned” during the calendar year, and recommended or proposed measures to improve compliance throughout the remainder of the project.

■ **Final report:** After construction has been completed, a final environmental compliance monitoring report shall be submitted to the CPUC and BLM for review and approval. This report shall be submitted within twelve (12) months of the completion of construction and shall include:

- A summary of all non-compliance records occurring during the construction phase, and remedial actions applied for each one, with additional explanatory text and explanation of resolution of each substantial non-compliance incident (often termed “Level 3 non-compliance”);
- A summary of all nest buffer incursions, including helicopter incursions, (see Mitigation Measure WIL-1c) occurring during the construction phase, with explanation of follow-up actions and resolution for each one;
- Final compilations of permanent and temporary impact acreages by vegetation or habitat type and land use jurisdiction;
- Summaries of all other monitoring reporting requirements, as specified in mitigation measures in the Vegetation and Wildlife Resources sections; and
- Discussion of “lessons learned” during construction, and recommended or proposed measures to improve compliance for future projects.

**Implementation locations:** San Bernardino County (all); WR-MSHCP (within the WR-MSHCP regardless of SCE’s PSE status); CV-MSHCP (within the CV-MSHCP regardless of SCE’s PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

**VEG-1b Prepare and implement a Worker Environmental Awareness Program (WEAP).** SCE shall prepare and implement a project-specific Worker Environmental Awareness Program (WEAP) to educate on-site workers about the Proposed Project's sensitive environmental issues. The WEAP shall be administered by the lead biologist or a biological monitor to all on-site personnel during the construction phase, including but not limited to surveyors, engineers, inspectors, contractors, subcontractors, supervisors, employees, monitors, visitors, and delivery drivers. If the WEAP presentation is recorded on video, it may be administered by any competent project personnel. Throughout the duration of construction, SCE shall be responsible for ensuring that all on-site project personnel receive this training prior to beginning work. A construction worker may work in the field along with a WEAP-trained crew for up to 5 days prior to attending the WEAP. SCE shall maintain a list of all personnel who have completed the WEAP training. This list shall be provided to the CPUC and BLM upon request.

The WEAP shall consist of a training presentation, with supporting written materials provided to all participants. At least 60 days prior to the start of ground-disturbing activities, SCE shall submit the WEAP presentation and associated materials to the CPUC and BLM for review and approval in consultation with the USFWS and CDFW.

The WEAP training shall include, at minimum:

- Overview of the project, the jurisdictions the project route passes through (e.g., BLM, reservation, WR-MSHCP, CV-MSHCP) and any special requirements of those jurisdictions.
- Overview of the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and the consequences of non-compliance with these acts.
- Overview of the project mitigation and biological permit requirements, and the consequences of non-compliance with these requirements.
- Sensitive biological resources on the project site and adjacent areas, including nesting birds, special-status plants and wildlife and sensitive habitats known or likely to occur on the project site, project requirements for protecting these resources, and the consequences of non-compliance.
- Construction restrictions such as limited operating periods, ESAs, and buffers.
- Avoidance of invasive weed introductions onto the project site and surrounding areas, and description of the project's weed control plan and associated compliance requirements for workers on the site.
- Function, responsibilities, and authority of biological and environmental monitors (i.e., SWPPP monitors, cultural resource monitors, etc.) and how they interact with construction crews.
- Requirement to remain within authorized work areas and on approved roads, with examples of the flagging and signage used to designate these areas and roads, and the consequences of non-compliance.
- Procedure for obtaining clearance from a biological monitor to enter a work site and begin work (including moving equipment), and the requirement to wait for that clearance.

- One-hour hold (or other method SCE will use to halt work when necessary to maintain compliance) and the requirement for compliance.
- ESAs and associated restrictions, and other restrictions such as no grading areas, flagging or signage designations, and consequences of non-compliance.
- Nest buffers and associated restrictions and the consequences of non-compliance. Procedure and time frame for halting work and removing equipment when a new buffer is established. Discussion of nest deterrents.
- Explanation that wildlife must not be harmed or harassed. Procedures for covering pipes, securing excavations, and installing ramps to prevent wildlife entrapment. What to do and who to contact if dead, injured, or entrapped animals are encountered (see Mitigation Measure WIL-5b).
- General safety protocols such as hazardous substance spill prevention, containment, and cleanup measures; fire prevention and protection measures; designated smoking areas (if any) and cigarette disposal; safety hazards that may be caused by plants and animals; and procedure for dealing with rattlesnakes in or near work areas or access roads (see Mitigation Measure WIL-5b).
- Project requirements that have resulted in repeated compliance issues on other recent transmission line projects, such as dust control, speed limits, track out (dirt or mud tracked from access roads or work sites onto paved public roads or other areas), personal protective equipment (PPE), work hours, working prior to clearance, and waste containment and disposal.
- Printed training materials, including photographs and brief descriptions of all special-status plants and animals that may be encountered on the project, including behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures.
- Contact information for SCE, construction management, and contractor environmental personnel, and who to contact with questions.
- Training acknowledgment form to be signed by each worker indicating that they understand and will abide by the guidelines and a hardhat sticker so WEAP attendance may be easily verified in the field.

**WEAP Lite.** An abbreviated version of WEAP training (“WEAP lite”) may be used for individuals who are exclusively delivery drivers, concrete truck drivers, or visitors to the project site, and will be provided by a qualified project biologist, biological monitor, or environmental field staff prior to those individuals entering or working on the project. Short-term visitors (total of 5 days or less per year) to the project site who will be riding with and in the company of WEAP-trained project personnel for the entire duration of their visit(s) are not required to attend WEAP or WEAP lite training.

WEAP lite training will provide sufficient information for the individual to understand and maintain compliance with project mitigation measures and permit conditions. WEAP lite presentations will be tailored to the situation and emphasize project requirements that are relevant to that situation (e.g., dust control, speed limits, staying within project roads and work areas, and use of washouts for concrete truck drivers).

A training acknowledgment form will be signed by each participant indicating that they understand and will abide by the guidelines and a hardhat sticker so WEAP lite attendance may be easily verified in the field. SCE will maintain a list of personnel who have completed WEAP lite training. This list will be provided to the CPUC and BLM upon request.

**WEAP Refreshers.** Biological monitors or environmental field staff will periodically present brief WEAP refresher presentations at tailboards to help construction crews and other personnel maintain awareness of environmental sensitivities and requirements. A 5- to 10-minute informal talk will be presented at each of the project's main contractor/subcontractor tailboards at least once a week.

When a contractor or subcontractor resumes work after a long break (more than six (6) consecutive calendar days with no substantial work on project construction in the field), a biological monitor or environmental field staff will provide an extended WEAP refresher presentation (10-20 minutes) at each of the contractor/subcontractor tailboards on the first day back to work.

The monitor will note the date, contractor or subcontractor, tailboard location and time, and topic(s) discussed during the WEAP refresher and include this information in their daily monitoring report.

**Implementation locations:** San Bernardino County (all); WR-MSHCP (within the WR-MSHCP regardless of SCE's PSE status); CV-MSHCP (within the CV-MSHCP regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

#### VEG-1c

**Minimize native vegetation and habitat loss.** Final engineering of the project shall minimize the extent of disturbance and removal of native vegetation and habitat, to the extent safe and feasible. Wherever feasible, work activities and roadways will avoid or minimize direct or indirect effects to sensitive habitat types or jurisdictional waters and provide buffer areas to minimize disturbance. Wherever feasible, project access will use existing routes or bridges over jurisdictional waters.

As feasible, and consistent with project safety and security protocols, landowner preferences, and any other applicable regulations or requirements, existing gates on project access roads will be closed and secured when project personnel enter or leave an area.

Prior to beginning any ground-disturbing activities, SCE shall provide CPUC and BLM with final engineering GIS shapefiles depicting all temporary and permanent disturbance areas, as well as summary data on temporary and permanent disturbance for each vegetation or habitat type within each jurisdictional area (San Bernardino County, WR-MSHCP, CV-MSHCP, reservation, and BLM). All project disturbance areas within mapped grassland/forbland will be further categorized as either suitable or not suitable as Stephens' kangaroo rat habitat, and the relative cover of native perennial grasses shall be quantified (see VEG-1d, Part B).

On completion of project construction, SCE shall provide CPUC and BLM with GIS shapefiles of all actual temporary and permanent disturbance areas, aerial imagery of the project area, and summary data of all discrepancies between final engineering and "as-built" conditions for each vegetation or habitat type, within each jurisdictional area (San Bernardino County, WR-MSHCP, CV-MSHCP, reservation, and BLM).

To the extent feasible, vegetation removal within work areas will be minimized and construction activities will implement drive and crush access and site preparation rather than grading.

To the extent feasible, stockpiling of spoils and salvaged topsoil will be located in previously disturbed areas, and will avoid native vegetation.

Prior to any construction, equipment or crew mobilization at each work site, work areas will be marked with staking or flagging to identify the limits of work and will be verified by project environmental staff and CPUC Environmental Monitor. Staking and flagging will clearly indicate the work area boundaries. Where staking cannot be used, traffic cones, traffic delineators, or other markers will be used. Staking and flagging or other markers will be in place during construction activities at each work site and will be refreshed as needed. Coded flagging colors or color combinations will be consistent and uniform across the project. All work activities, vehicles, and equipment will be confined to approved roads and staked and flagged or marked work areas.

**Implementation locations:** San Bernardino County (all); WR-MSHCP (within the WR-MSHCP regardless of SCE's PSE status); CV-MSHCP (within the CV-MSHCP regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

**VEG-1d** **Restore or revegetate temporary disturbance areas.** [Supersedes APM BIO-1 to provide further specificity.] This measure has two parts: Part A and Part B. Part A is applicable to all temporary disturbance areas, and Part B is applicable to disturbance occurring in sensitive vegetation types and special-status species habitats.

For all revegetation or restoration areas, if a fire, flood, or other disturbance beyond the control of SCE, CPUC, and BLM damages a revegetation area within the monitoring period, SCE shall be responsible for a one-time replacement. If a second event occurs, no replanting is required, unless the event is caused by SCE's activity (based upon maintenance of erosion control measures; fencing, gates, or other site control; or investigation by a firefighting agency).

**Part A: Habitat restoration and revegetation for all temporary disturbance areas.**

SCE shall prepare and implement a Habitat Restoration and Revegetation Plan (HRRP), to restore or revegetate all temporary disturbance areas, including temporary disturbance areas around tower construction sites, laydown or staging areas, temporary access and spur roads, cut and fill slopes, and locations of existing towers that are removed during construction of the project. For temporary disturbances in agriculture, developed/disturbed, and most grassland/forbland (excluding suitable Stephens' kangaroo rat habitat and any areas with 10 percent or greater relative cover of native perennial grass species), and for temporary disturbance areas that cannot be effectively revegetated and are therefore subject to off-site compensation (Mitigation Measure VEG-1e), the overall goals of the HRRP will be to minimize weed invasion, dust generation, and soil erosion. The goals for sensitive vegetation and special-status species habitat are described in Part B of this Mitigation Measure.

The Draft HRRP shall be submitted to CPUC and BLM review and approval prior to the beginning of ground-disturbing activities. SCE shall incorporate all requested revisions in coordination with the CPUC and BLM and finalize the HRRP within 12 months from the start of construction.

For all temporary disturbance areas, the HRRP shall include the following elements:

- A statement of revegetation goals and objectives for each portion of the project area, based on vegetation type and jurisdictional status of each site.

- Quantitative success criteria for each revegetation or restoration site or category.
- Implementation details, including but not limited to topsoil stockpiling and handling; post-construction site preparation; soil decompaction and recontouring; planting and seeding palettes to include only native, locally sourced materials with confirmed availability from suppliers; fall-season planting or seeding dates.
- Maintenance, including but not limited to irrigation or hand-watering schedule and equipment, erosion control, and weed control.
- Monitoring and Reporting, specifying monitoring schedule and data collection methods throughout establishment of vegetation with key indicators of successful or unsuccessful progress, and quantitative values to objectively determine success or failure at the conclusion of the monitoring period.
- Contingency measures such as re-planting, drainage repairs, adjustments to irrigation or weeding schedule, and extension of maintenance beyond the original schedule, to repair or remediate sites not on track to meet success criteria, or not meeting the criteria at the close of the originally scheduled monitoring period.

The Integrated Weed Management Plan (Mitigation Measure VEG-2a) will be implemented throughout implementation of the HRRP. For all revegetation or restoration areas, only seed or potted nursery stock of locally occurring native species from a local source will be used for revegetation. Seeding and planting will be conducted as described in Chapter 5 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen, 2003). The list of plants observed during botanical surveys of the project area will be used as a guide to site-specific plant selection.

For all revegetation or restoration areas, the HRRP will include objective, quantifiable success criteria, commensurate with the goals for each site. Monitoring of the reclamation, revegetation, or restoration sites will continue annually for no fewer than five (5) years or until the defined success criteria are achieved, whichever is later. SCE will be responsible for implementing remediation measures as needed. Following remediation work, each site will continue to be subject to the success criteria required for the initial reclamation, revegetation, or restoration. The monitoring period for remediation work will be concurrent with the monitoring period required for the initial reclamation, revegetation, or restoration.

**Part B: Additional habitat restoration and revegetation requirements for sensitive vegetation and special-status species habitat.**

For temporary disturbances in grassland/forbland that is either suitable Stephens' kangaroo rat habitat, or has 10 percent or greater relative cover of native perennial grass species (see VEG-1c), and in all other vegetation types (alluvial scrub, coast live oak woodland, coastal sage scrub, chaparral, desert scrub, riparian woodland, and aeolian sand), the Habitat Restoration and Revegetation Plan will be designed to replace the habitat values present prior to disturbance (i.e., native plant species cover, habitat structure, and soil or substrate conditions). Stephens' kangaroo rat habitat suitability is to be determined by a qualified SKR biologist. The following performance standards must be met by the end of the monitoring period:

- At least 80 percent of the vegetation cover within the restoration area shall be native species that naturally occur in local native habitats; in grassland or forbland habitat this criterion will be adjusted to account for pre-disturbance non-native grass cover;

- Absolute cover of native plant species and density of native shrubs and trees within the restoration areas shall equal at least 60 percent of the pre-disturbance or reference vegetation cover and density; and
- The site shall have persisted successfully without irrigation or remedial planting for a minimum of two years prior to completion of monitoring.

For revegetation or restoration in these vegetation or habitat types, the HRRP will include (in addition to the components listed in Part A):

- A map depicting the locations of all temporary disturbance areas in these vegetation or habitat types, including a quantitative evaluation of native grass cover and Stephens' kangaroo rat habitat suitability in all mapped grassland/forbland areas, subject to requirements of Part B;
- An inventory of any temporary disturbance areas that cannot be effectively revegetated or restored to replace habitat values within a five-year timeframe (these will be categorized as "long-term disturbance areas," to be addressed under habitat compensation, Mitigation Measure VEG-1e).

**Reporting (for Part A and Part B).** For all revegetation or restoration areas, SCE will provide annual reports to the CPUC and BLM verifying the total vegetation acreage subject to temporary and permanent disturbance, identifying which items of the HRRP have been completed, and which items are still outstanding. The annual reports will also include a summary of the reclamation, revegetation, or restoration activities for the year, a discussion of whether performance standards for the year were met, any remedial actions conducted and recommendations for remedial action, if warranted, that are planned for the upcoming year. Each annual report will be submitted within 90 days after completion of each year of revegetation and restoration work.

**Implementation locations:** Parts A and B of this mitigation measure shall apply as follows: San Bernardino County (all); WR-MSHCP (within the WR-MSHCP regardless of SCE's PSE status); CV-MSHCP (within the CV-MSHCP regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

**VEG-1e Compensate for permanent habitat loss.** SCE shall compensate for permanent or long-term habitat loss through off-site habitat acquisition and management or through participation in an approved in-lieu fee compensatory mitigation bank. This compensation may be accomplished through participation in the WR-MSHCP, CV-MSHCP (within the respective MSHCP areas) if SCE obtains PSE status. This mitigation measure will be applicable to all permanent project disturbance areas and to areas designated as temporary disturbance, but that cannot be effectively revegetated or restored to replace habitat values within a five-year timeframe.

Habitat compensation for all permanent or long-term habitat loss that is not compensated through participation in the WR-MSHCP or CV-MSHCP will be accomplished by acquisition of mitigation land or conservation easements or by providing funding for specific land acquisition, endowment, restoration, and management actions. SCE will prepare a Habitat Compensation Plan to be reviewed and approved by the CPUC, BLM, in consultation with the USFWS and CDFW.

SCE will acquire and protect, in perpetuity, compensation habitat to mitigate impacts to biological resources as detailed below. SCE shall be responsible for the acquisition, initial pro-



tection and habitat improvement, and long-term maintenance and management of compensation lands. The compensation lands will be placed under conservation management to be funded through the terms described herein. If there is any conflict between the requirements of this mitigation measure and requirements of any resource agency permit (e.g., USFWS Biological Opinion or CDFW Incidental Take Permit), the more stringent requirement shall apply.

The acreages of compensation land will be based upon final engineering calculation of impacted acreage for each resource and on ratios set forth in this measure, or in the USFWS Biological Opinion, the CDFW Streambed Alteration Agreement, the CDFW Incidental Take Permit, or the Consistency Determination, whichever presents a higher ratio. Acreages will be adjusted as appropriate for other alternatives or future modifications during implementation.

Compensation will be provided for impacts to the following resources, at the ratios specified below (acres acquired and preserved to acres impacted). These ratios reflect multiple biological resource values, including habitat suitability for special-status species.

- Previously disturbed lands (agriculture, developed/disturbed) and open water: n/a (no habitat compensation required)
- Chaparral, desert scrub, and grassland/forbland: 1:1
- Alluvial scrub, coast live oak woodland, riparian woodland, and aeolian sand: 3:1
- Coastal sage scrub within USFWS designated coastal California gnatcatcher critical habitat and coastal sage scrub outside of designated critical habitat that is occupied by California gnatcatcher: 2:1
- Coastal sage scrub outside of USFWS designated coastal California gnatcatcher critical habitat that is suitable habitat, but not occupied by California gnatcatcher: 1:1

The Habitat Compensation Plan will specify compensation acreage for each vegetation or habitat type, based on final engineering and on MSHCP coverage as applicable. Final compensation requirements may be adjusted to account for any deviations in project disturbance, according to the as-built shapefiles aerial imagery (Mitigation Measure VEG-1c).

**Compensation Land Selection Criteria.** Criteria for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of compensation lands for impacts to biological resources will include all of the following:

- Compensation lands will provide habitat value that is equal to or better than the quality and function of the habitat impacted by the project, taking into consideration soils, vegetation, topography, human-related disturbance, wildlife movement opportunity, proximity to other protected lands, management feasibility, and other habitat values, subject to review and approval by CPUC and BLM;
- To the extent that proposed compensation habitat may have been degraded by previous uses or activities, the site quality and nature of degradation must support the expectation that it will regenerate naturally when disturbances are removed;
- Be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;

- Not have a history of intensive recreational use or other disturbance that might cause future erosion or other habitat damage, and make habitat recovery and restoration infeasible;
- Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;
- Not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat;
- Must provide wildlife movement value equal to that on the project site, based on topography, presence and nature of movement barriers or crossing points, location in relation to other habitat areas, management feasibility, and other habitat values; and
- Have water and mineral rights included as part of the acquisition, unless the CPUC and BLM, in consultation with CDFW and USFWS, agree in writing to the acceptability of land without these rights.

**Review and Approval of Compensation Lands Prior to Acquisition.** SCE shall submit a Draft Habitat Compensation Plan for review and approval by the CPUC and BLM describing the parcel(s) intended for protection. This Plan will discuss the suitability of the proposed parcel(s) as compensation lands in relation to the selection criteria listed above.

**Management Plan.** SCE or approved third party will prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan will be to support and enhance the long-term viability of the biological resources. The Management Plan will be submitted for review and approval to the CPUC and BLM, in consultation with CDFW and USFWS.

**Compensation Lands Acquisition Requirements.** SCE will comply with the following requirements relating to acquisition of the compensation lands after the CPUC and BLM have approved the proposed compensation lands:

- **Preliminary Report.** SCE or an approved third party will provide a recent preliminary title report, initial hazardous materials survey report, biological resources analysis, and other necessary or requested documents for the proposed compensation land to the CPUC and BLM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPUC in consultation with CDFW and USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission, and the Wildlife Conservation Board.
- **Title/Conveyance.** SCE will acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPUC and BLM, in consultation with USFWS and CDFW. Any transfer of a conservation easement or fee title must be to CDFW, to a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPUC and BLM. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement will be recorded in favor of CDFW or another entity approved by the CPUC and BLM. If an entity other than CDFW holds a conservation easement over the compensation lands, the CPUC and BLM may require that CDFW or another entity approved by the CPUC and BLM, in consultation with CDFW and USFWS, be named a third party beneficiary of the

conservation easement. SCE will obtain approval of the CPUC and BLM of the terms of any transfer of fee title or conservation easement to the compensation lands.

- **Initial Protection and Habitat Improvement.** SCE will fund activities that the CPUC and BLM may require for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. A non-profit organization, CDFW, or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPUC and BLM, in consultation with USFWS and CDFW, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee.
- **Property Analysis Record.** Upon identification of the compensation lands, SCE will conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPUC and BLM, in consultation with USFWS and CDFW, before it can be used to establish funding levels or management activities for the compensation lands.
- **Long-term Maintenance and Management Funding.** SCE will provide funding to establish an account with non-wasting capital that will be used to fund the long-term maintenance and management of the compensation lands. The amount of money will be determined through an approved PAR or PAR-like analysis conducted for the compensation lands. SCE must obtain the BLM and Riverside County's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands. The CPUC and BLM will consult with USFWS and CDFW before deciding whether to approve an entity to hold the project's long-term maintenance and management funds.

SCE will ensure that an agreement is in place with the long-term maintenance and management fund holder/manager to ensure the following requirements are met:

- **Interest.** Interest generated from the initial capital long-term maintenance and management fund will be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, habitat improvements, patrol and law enforcement activities, and any other action that is approved by the CPUC and BLM and is designed to protect or improve the habitat values of the compensation lands.
- **Withdrawal of Principal.** The long-term maintenance and management fund principal will not be drawn upon unless such withdrawal is deemed necessary by the CPUC and BLM, or by the approved third-party long-term maintenance and management fund manager, to ensure the continued viability of the species on the compensation lands.
- **Pooling Long-Term Maintenance and Management Funds.** An entity approved to hold long-term maintenance and management funds for the project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and management of compensation lands. However, for reporting purposes, the long-term maintenance and management funds for this project must be tracked and reported individually to the CPUC and BLM.

- **Other Expenses.** In addition to the costs listed above, SCE will be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to the title and document review costs incurred from other state agency reviews, overhead related to providing compensation lands to CDFW or an approved third party, escrow fees or costs, environmental contaminants clearance, and other site cleanup measures.
- **Delegation.** The responsibility for acquisition of compensation lands may be delegated to a third party, by written agreement of the CPUC and BLM, in consultation with CDFW, prior to land acquisition, enhancement or management activities.

**Implementation Locations:** This mitigation measure applies to all locations within San Bernardino County and on all BLM lands, and is recommended for implementation on all tribal lands. Within the WR-MSHCP and CV-MSHCP areas, if SCE does not obtain PSE status under the applicable MSHCP, this mitigation measure shall apply within the MSHCP area. If SCE obtains PSE status under either MSHCP, the project's permanent habitat impacts will be compensated according to the requirements of the MSHCP and this mitigation measure will not apply within the applicable MSHCP area.

***Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds***

In addition to the direct impacts to native vegetation and habitat, the Proposed Project's construction, restoration, and O&M activities could have several indirect impacts to surrounding vegetation and habitat. These impacts may include dust caused by project activities or vegetation removal, interruption of windblown sand transport to downwind habitat, interruption of surface flows and water or sediment supply to downstream habitat, and the introduction or spread of invasive species. The extent and severity of these indirect habitat effects would be dependent on the sensitivity of adjacent habitat and the plants or wildlife it supports. O&M activities associated with the Proposed Project are expected to be less than or equivalent to O&M of the existing West of Devers system and impacts would be similar to or reduced from existing conditions.

**Dust.** Site preparation including vegetation removal and grading, vehicle traffic on access roads and work areas, and other project activities throughout the construction and restoration phases of the project would generate dust. Disturbed soils would be exposed for much of the 36 to 48-month construction phase and the restoration phase, leading to increased wind erosion and dust generation. Dust may affect surrounding vegetation by interfering with leaf surface physiology (ability to obtain light and atmospheric gases). Dust generated during the Proposed Project's O&M phase is not expected to cause new adverse effects beyond the existing conditions (i.e., O&M of the existing West of Devers system).

SCE's APM AIR-1 is superseded by dust control measures developed in the Air Quality section (Section D.3). Mitigation Measure AQ-1a (Control Fugitive Dust), AQ-1b (Control Off-Road Equipment Emissions), WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits) would further mitigate dust generation. With implementation of these Air Quality mitigation measures, dust generated during the Proposed Project's construction and restoration phases, and its indirect effects to vegetation and habitat, would be minimized. In addition, Mitigation Measure VEG-1d would revegetate or restore temporary habitat disturbance areas. By replacing vegetation cover, the soil's vulnerability to wind erosion and dust generation would be reduced.

**Sand transport.** Aeolian (wind-blown) sand and the special-status species endemic to dune and sand field habitat are dependent on an influx of sand from upwind sources. Aeolian sand habitat is found on Segment 6 of the Proposed Project route, and more extensive aeolian sand habitat is located downwind of the route, in the Coachella Valley. Land development and linear infrastructure (rail lines and Interstate-10) interrupt sand transport to aeolian sand habitat in the Coachella Valley. The CV-MSHCP recognizes sand source and sand transport areas as important to the long-term viability of aeolian sand habitats, and classifies sand source and sand transport areas along parts of Segment 6.

Project activities and facilities would have a minor impact on windblown sand transport. For example, small windblown sand deposits would accumulate on the leeward sides of tower footings, road berms, or other project features. This potential impact would not markedly affect windblown sand supply to downwind habitat areas.

**Surface water flow.** Project activities could interrupt localized surface hydrology. For example, berms or channel crossings could impound stormwater runoff and sediment on the upstream sides. This impoundment could affect native vegetation and habitat by inundating, burying, or covering it in sediment. In addition, interruption, impoundment, or redirection of natural flows (including infrequent storm flows) could cause substantial erosion to downstream soils where flow is redirected, and prevent water and sediment from reaching downstream vegetation and habitat. This effect could reduce vegetation productivity and related wildlife habitat values (food, shade, and shelter) and reduce availability of silt and sand as habitat substrate for plants and wildlife downstream. Upstream inundation and downstream erosion also could eliminate vegetation and habitat for wildlife, including special-status species, by killing or uprooting plants and eroding or burying burrows. These effects may be limited to the Proposed Project's construction and or restoration phases, if surface contours and soil stability are returned to pre-disturbance conditions during restoration. Alternately, these effects could persist throughout the O&M phase if they are caused by permanent structures (such as impoundments at road crossings).

SCE would implement APM HYDRO-1 through APM HYDRO-3 (see Table B-18) to minimize alteration of surface flows. Under these APMs, drainage improvements (e.g., channel crossings and downslope road drainage ways) would be designed to maintain existing flow patterns; soil disturbance would be minimized and designed to prevent long-term erosion through revegetation or construction of permanent erosion control structures; and erosion control plans would be incorporated into the construction bidding specifications to ensure compliance by SCE's contractor. APMs HYDRO-2 and HYDRO-3 are superseded by Mitigation Measure WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits). Mitigation Measure WR-2a would minimize or mitigate the effects of surface hydrology alterations. These measures include mulching, physical stabilization, dust suppression, berms, ditches, and sediment barriers, and ensure proper compliance with Storm Water Pollution Prevention Plan (SWPPP) requirements and Best Management Practices (BMPs).

Mitigation Measure VEG-1d would require revegetation or restoration of temporarily disturbed areas, which would reduce runoff and potential for downstream erosion. Mitigation Measure VEG-1e would require compensation for permanent habitat loss, including drainage features. And Mitigation Measure VEG-3a (Minimize impact and ensure no net loss for jurisdictional waters and wetlands) requires restoration or compensation to achieve no net loss of wetland and watercourse habitat values. With implementation of these measures, the effects of surface hydrology alteration to biological resources would be minimized.

**Invasive weeds.** Non-native invasive plants that become established in a new area may displace native species (including special-status species or plants that provide food or cover for wildlife), alter natural habitat structure, and increase wildfire frequency (Zouhar et al., 2008; Lovich and Bainbridge, 1999).

These plants are considered “weeds” or “pest plants” in natural landscapes (Bossard et al., 2000). Invasive weeds generally spread most readily in disturbed, graded, or cultivated soils, including soils disturbed by construction equipment. Weeds and pest plants are defined here to include any species of non-native plants identified on the weed lists of the California Department of Food and Agriculture, the California Invasive Plant Council, or of special concern identified by BLM.

The prevalence of invasive plants is high throughout much of the Proposed Project area, even in native habitats, generally consistent with weed abundance throughout the western Colorado Desert and Inland Empire areas. Numerous invasive weeds have already become widespread and naturalized throughout the Proposed Project area and prevention of further spread is impracticable for some of them. Examples of established weeds include several Eurasian grasses (*Bromus* spp., *Schismus* spp., *Avena* spp.), mustards (*Brassica* spp. and *Hirschfeldia incana*), and Russian thistle (*Salsola* spp.). Other invasive plants (e.g., saltcedar, *Tamarix ramosissima*) are damaging to riparian habitat, but pose little or no threat to upland habitat. While project-related soil disturbance may cause on-site expansion of these ubiquitous species, this effect would not damage off-site habitat due to their existing abundance and distribution. However, these ubiquitous weeds would probably hinder revegetation or restoration of temporary disturbance areas, and therefore should be controlled on the Proposed Project site during revegetation efforts

Project construction activities and soil disturbance could introduce non-native invasive plant species into new areas or facilitate their proliferation and spread. New introductions occur when seeds are inadvertently introduced to a site, most often when they are carried with mud on the tires or understructure of equipment transported from off-site, or with mulch, hay bales, or wattles used for erosion control. Soil disturbance tends to propagate weeds, which are adapted to soil disturbance. Without weed control, weeds already present in the area could increase their abundance in soils disturbed by project activities throughout the project area, and project equipment could import new invasive species from off-site. Once established in newly disturbed soils, these weeds could spread into surrounding undisturbed lands.

Mitigation Measure VEG-2a would require SCE to prepare and implement an Integrated Weed Management Plan (IWMP), to address prevention of weed invasions, monitoring to detect weed infestations, and control measures. Weed control would probably necessitate use of herbicides which may, in turn, pose risks to vegetation or wildlife. Most aquatic herbicides and several terrestrial herbicides are non-selective and could affect non-target vegetation. Accidental spills and herbicide drift from treatment areas could be particularly damaging to non-target vegetation on public land, and crop plants or other vegetation near treatment areas. Herbicides that persist on the vegetation or soil could adversely affect wildlife that feed on target plants or are exposed to the herbicides (e.g., by digging or rolling in treated areas). These potential effects would be avoided or minimized through specific requirements of the IWMP, as specified in Mitigation Measure VEG-2a.

***Mitigation Measure for Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds***

The Proposed Project’s indirect impacts to biological resources caused by dust, interrupted sand transport, and interrupted surface hydrology would be mitigated through SCE’s APMs and mitigation measures referenced above from the Air Quality and Waters sections. In the case of interrupted sand transport, the Proposed Project’s potential impacts would not require mitigation. The following mitigation measure is designed to minimize the Proposed Project’s effects to introduce or spread invasive plants in the Proposed Project area.

**VEG-2a Prepare and implement an Integrated Weed Management Plan.** SCE shall prepare and implement an Integrated Weed Management Plan (IWMP) describing the proposed methods of preventing or controlling project-related spread of weeds or new weed infestations. The IWMP also must meet BLM's requirements for NEPA disclosure and analysis if herbicide use is proposed on BLM land (i.e., the IWMP must tier from the BLM's 2007 *Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States PEIS*). A Draft IWMP shall be submitted to the CPUC and BLM for review and approval at least 60 days prior to SCE's application for Notice to Proceed, and no pre-construction activities (e.g., for geotechnical borings, hazardous waste evaluations, etc.), construction, equipment or crew mobilization, or project-related ground-disturbing activity shall proceed until the IWMP is approved.

For the purpose of the IWMP, "weeds" shall include designated noxious weeds, as well as any other non-native weeds or pest plants identified on the weed lists of the California Department of Food and Agriculture, the California Invasive Plant Council, or identified by BLM as special concern. The IWMP will include the contents listed below. The IWMP will be implemented throughout project pre-construction, construction, and post-construction restoration phases. The IWMP will include the information defined in the following paragraphs.

**Background.** An assessment of the Proposed Project's potential to cause spread of invasive non-native weeds into new areas, or to introduce new non-native invasive weeds into the ROW. This section must list known and potential non-native and invasive weeds occurring on the ROW and in the project region, and identify threat rankings and potential consequences of project-related occurrence or spread for each species. This assessment will include, but is not limited to, weeds that (1) are rated high or moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), and (2) aid and promote the spread of wildfires (such as cheatgrass, Saharan mustard, and medusa head). This section will identify control goals for each species (e.g., eradication, suppression, or containment) likely to be found within the Proposed Project area.

**Pre-construction weed inventory.** SCE shall inventory all areas (both within and outside the ROW) subject to project-related vegetation removal/disturbance, "drive and crush," and ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and any potential new or improved access and spur roads. The weed inventory shall also include vehicle and equipment access routes within the ROW and all project staging and storage yards. Weed occurrences shall be mapped and described according to density and area covered. The map will be updated at least once a year.

**Pre-construction weed treatment.** Weed infestations identified in the pre-construction weed inventory shall be evaluated to identify potential for project-related spread. The IWMP will identify any infestations to be controlled or eradicated prior to project construction, or other site-specific weed management requirements (e.g., avoidance of soil or transport and site-specific vehicle washing where threat or spread potential is high). Control and follow-up monitoring of pre-construction weed treatment sites will follow methods identified in appropriate sections of the IWMP.

**Prevention.** The IWMP will specify methods to minimize potential transport of weed seeds and other propagules (e.g., rhizomes, stolons, roots) onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on known or likely invasive weeds in any portion of the ROW. The IWMP will specify inspection procedures for construction materials and equipment entering the Proposed Project area. Vehicles and

equipment may be inspected and cleaned at entry points to specified portions of the ROW, and before leaving work sites where weed occurrences must be contained locally. Construction equipment shall be cleaned of dirt and mud that could contain weed seeds, roots, or rhizomes. Equipment shall be inspected to ensure it is free of any dirt or mud that could contain weed seeds, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering project work areas.

All vehicles will be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to BLM and CPUC monitors on request.

Erosion control materials (e.g., hay bales) must be certified free of weed seed before they are brought onto the site. The IWMP must prohibit on-site storage or disposal of mulch or green waste that may contain weed material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal, and transported to a licensed landfill or composting facility.

The IWMP will specify guidelines for any soil, gravel, mulch, or fill material to be imported into the Proposed Project area, transported from site to site within the Proposed Project area, or transported from the Proposed Project area to an off-site location, to prevent the introduction or spread of weeds to or from the Proposed Project area.

**Monitoring.** The IWMP shall specify methods to survey for weeds during pre-construction, construction, and restoration phases; and shall specify qualifications of personnel responsible for weed identification and monitoring. A monitoring schedule shall be included to ensure timely detection and immediate treatment of weed infestations to prevent further spread. Surveying and monitoring for weed infestations shall occur at least two times per year, to coincide with the early detection period for early season and late season weeds (i.e., species germinating in winter and flowering in late winter or spring, and species germinating later in the season and flowering in summer or fall). It also must include methods for marking invasive weeds occurring within the ROW, and recording and communicating these locations to weed control staff. The map of weed locations (discussed above) shall be updated as necessary or no less frequently than once a year. The monitoring section shall also describe methods for post-treatment monitoring to evaluate success of control efforts and any need for follow-up treatments.

**Control.** The IWMP shall specify manual and chemical weed control methods to be employed. The IWMP shall include only weed control measures with a demonstrated record of success for target weeds, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any weed infestation is located, to ensure effective and timely weed control. Weed infestations shall be treated for control or eradication as soon as possible upon discovery before they go to



seed, to prevent further spread. All proposed weed control methods must minimize the extent of any disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage from herbicide use or other control methods to any environmentally sensitive areas identified within or adjacent to the ROW.

Weed infestations will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. For eradication, when no new seedlings or resprouts are observed for three consecutive, normal rainfall years, *OR* for five consecutive years regardless of rainfall, the weed occurrence can be considered eradicated and weed control efforts may cease for the site.

Manual control shall specify well-timed removal of weeds or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the Riverside or San Bernardino County Agricultural Commissioners, if such guidelines are available. If there are no applicable guidelines, seed heads and plants will be removed from the site in a covered vehicle to prevent seed dispersal, and transported to a licensed landfill or composting facility.

The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to native vegetation or special-status plants, consistent with BLM's *Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States* (BLM, 2007) and *National Invasive Species Management Plan* (NISC, 2008). Only state and BLM-approved herbicides may be used. Herbicide treatment will be implemented by a Licensed Qualified Applicator. Herbicides shall not be applied during or within 72 hours of predicted rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied when wind velocities exceed six (6) mph. All herbicide applications will follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations.

**Reporting schedule and contents.** The IWMP shall specify reporting schedule and contents of each report.

**Implementation locations:** San Bernardino County (all); WR-MSHCP (all, regardless of SCE's PSE status); CV-MSHCP (all, regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

***Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality***

The Proposed Project would affect jurisdictional waters of the State or waters of the U.S. During construction, these impacts would include placing fill material into jurisdictional waters to provide level, dry work areas, tower pads, or roadways; constructing roadways, culverts, or other crossing structures across jurisdictional channels; installing channel armoring (such as riprap) in a channel near a work site to prevent flooding or erosion; constructing impoundments or detention basins on jurisdictional channels; or grading or other site preparation that eliminates or redirects natural runoff. Construction impacts to jurisdictional waters, including intermittent channels, could also affect downstream wetlands, riparian, or aquatic habitat and the biological resources found in those downstream habitats.

The types of impacts to jurisdictional waters that may occur during restoration would be similar to the construction-phase impacts listed above, but generally would affect smaller areas. During O&M, maintenance of roads and other project facilities may require culvert replacement or other crossing or channel

improvements that would affect drainage features, possibly including federally protected wetlands. O&M activities associated with the Proposed Project are expected to be less than or equivalent to O&M of the existing West of Devers system and impacts would be similar to or reduced from existing conditions.

Jurisdictional waters are not limited to wetlands or mapped “blueline” streams; many intermittent channels and washes meet criteria as waters of the State or waters of the U.S. All project impacts to waters of the State or waters of the U.S. (including construction, restoration, and O&M phases) will be subject to permitting under the California Fish and Game Code and federal Clean Water Act (CWA). SCE must prepare and submit appropriate applications, notifications, and fees to the U.S. Army Corps of Engineers (according to Section 404 of the CWA), the CDFW (according to Sections 1600-1616 of the California Fish and Game Code), and the California Regional Water Quality Control Board (according to Section 401 of the CWA). Federal CWA permitting is required for projects that would place dredged or fill material into jurisdictional waters of the U.S. State authorization is required if projects would substantially divert or obstruct the natural flow of any river, stream, or lake; substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

SCE has not completed a delineation of jurisdictional waters for the Proposed Project, but has prepared a “drainage assessment” as preliminary information and to support project design (Preliminary Jurisdictional Drainage Assessment; LSA, 2013b; see Appendix N of PEA Appendix F). The drainage assessment estimates maximum potential permanent and temporary impacts to jurisdictional drainage features, by acreage and linear feet. These estimates are shown in Tables D.4-5 and D.4-6. The drainage assessment identifies 498 drainage features by location within the Proposed Project area, and linear distance of each one, but does not determine the width or acreage for most features. Acreages were estimated only for substantial riparian habitat associated with the drainage features. The Drainage Assessment estimates that approximately 26 of the drainage features have potential to meet the three federal wetland criteria (i.e., hydrophytic vegetation, hydric soils, and wetland hydrology). Several seasonally ponded sites were mapped within the Proposed Project area, but none of them meet the federal criteria as wetlands or the WR-MSHCP criteria for vernal pools.

The drainage assessment is conservative, estimating maximum disturbance to jurisdictional features. Not all jurisdictional waters within the ROW or the Proposed Project study area would be affected by the Proposed Project. Access road construction or improvements would probably have some effect, even if minimal, on each linear drainage way crossing the ROW (e.g., new crossings or improvements to crossings on existing access routes). More substantial effects, such as grading and vegetation removal for transmission tower pads, may be avoided or minimized for many drainage features through the Proposed Project design process. Impacts to vegetation and habitat types analyzed herein are maximum acreage estimates. Mitigation measures are designed to completely mitigate these maximum potential effects, although actual project effects to jurisdictional impacts will be reduced from the estimates. SCE will prepare a Jurisdictional Delineation (JD) Report of the project’s impact areas after completing final design (PEA, page 4.4-112) to identify and quantify all site-specific project impacts to jurisdictional waters. The JD will support SCE’s permitting under state and federal regulatory processes. SCE would obtain the required permits or authorizations for impacts to jurisdictional waters and would prepare a Habitat Mitigation and Monitoring Plan (HMMP) describing its proposed mitigation, including restoration approach, restoration success criteria, monitoring, and reporting requirements, and specifying compensation ratios for affected jurisdictional waters.

Potential impacts to jurisdictional drainages would be reduced through implementation of a Storm Water Pollution Prevention Plan (SWPPP) including Best Management Practices (BMPs) as described in Section 4.9 of the PEA (see page 4.9-21), and compliance with the conditions set forth in State and federal permits or authorizations (California Fish & Game Code Sections 1600-1616 and CWA Sections 401 and 404). In

addition, Mitigation Measure WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits) would further minimize or mitigate the effects of surface hydrology alterations. Mitigation Measure VEG-1d would require revegetation or restoration of temporarily disturbed areas, including drainage features. Mitigation Measure VEG-1e would require compensation for permanent habitat loss, including drainage features. And Mitigation Measure VEG-3a would require restoration or compensation to achieve no net loss of wetland and watercourse habitat values. Taken together, these measures would effectively avoid or mitigate the Proposed Project's adverse impacts to biological resources within jurisdictional waters.

***Mitigation Measures for Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality.***

**VEG-3a Minimize impacts and ensure no net loss for jurisdictional waters and wetlands.**

**Impact minimization.** Project design and construction activities shall minimize impacts to drainage features, including ephemeral or intermittent washes, streams, and wetlands to the extent feasible. This mitigation measure is not limited to wetlands or mapped "blueline" streams, but encompasses all jurisdictional waters, generally including intermittent channels or washes.

**No net wetlands loss and watercourse impacts minimization.** SCE shall prepare an HMMP which will include restoration or compensation mitigation to assure no net loss of wetland acreage or wetland habitat value from direct or indirect project impacts, including reduction of wetland acreage, and downstream or upstream effects to channels or their associated habitat. The no net loss standard shall be reached through (1) ecological restoration or revegetation of temporarily disturbed areas to fully replace habitat extent and habitat value, and (2) compensation at a ratio of 1:1 to replace permanently impacted non-wetland jurisdictional areas, and at 3:1 to replace permanently impacted state or federally jurisdictional wetland areas. Restoration and compensation mitigation for impacts to jurisdictional waters shall conform to the requirements of Mitigation Measures VEG-1d (Restore or revegetate temporary disturbance areas) and VEG-1e (Compensate for permanent habitat loss). All wetlands and watercourses, whether intermittent or perennial, will be retained to the extent feasible, and appropriate setbacks or other means will be employed to prevent adverse impacts to surface waters or associated habitat values. The HMMP shall incorporate wetland/water permit requirements and shall be subject to review and approval by the CPUC and BLM. All restoration or compensation mitigation described in the HMMP shall be implemented in full. In the case of any conflict between the mitigation ratios or other requirements specified in wetland/water permits for the project and the mitigation ratios or other requirements specified in this mitigation measure, the higher mitigation ratios and more stringent requirements shall apply.

**Table D.4-5. Maximum Potential Permanent Impacts to Jurisdictional Drainage Features**

| Segment                  | Potentially Jurisdictional Drainage Features (linear feet) |                         |   |                              | Potentially Jurisdictional Riparian Vegetation (acres) |                        |  |                          |
|--------------------------|--|-------------------------|---|------------------------------|--|------------------------|--|--------------------------|
|                          | CDFW / EPA / USACE / SWRCB                                 |                         | CDFW / SWRCB<br>Nonwetland<br>Drainages | Total Impacts<br>(linear ft) | CDFW / EPA / USACE / SWRCB                             |                        | CDFW / SWRCB<br>Riparian<br>Vegetation | Total Impacts<br>(acres) |
|                          | Wetland<br>Drainages                                       | Nonwetland<br>Drainages |   |                              | Wetland<br>Vegetation                                  | Riparian<br>Vegetation |  |                          |
| 1                        | 0  | 960                     | 0                                       | 960                          | 0  | 0                      | 0                                      | 0                        |
| 2                        | 114  | 1,054                   | 2,000                                   | 3,168                        | 0  | 0.03                   | 0                                      | 0.03                     |
| 3                        | 0  | 1,354                   | 1,636                                   | 2,990                        | 0  | 0                      | 0                                      | 0                        |
| 4                        | 0  | 1,762                   | 122                                     | 1,884                        | 0  | 1.04                   | 0.2                                    | 1.24                     |
| 5                        | 0  | 1,400                   | 0                                       | 1,400                        | 0  | 2.28                   | 0.04                                   | 2.32                     |
| 6                        | 0  | 1,115                   | 408                                     | 1,523                        | 0  | 0.16                   | 0                                      | 0.16                     |
| <b>Total<sup>1</sup></b> | <b>114</b>   | <b>7,645</b>            | <b>4,166</b>                            | <b>11,925</b>                | <b>0</b>   | <b>3.51</b>            | <b>0.24</b>                            | <b>3.75</b>              |

1 - Totals do not include the area (i.e., acres) of the drainage features because only one dimensional (i.e., linear feet) data was collected. Therefore, totals do not fully quantify the extent of the effects of the Proposed Project to potentially jurisdictional drainages mapped within the Proposed Project study area. Additionally, many drainage features will be avoided in final engineering plans.

**Table D.4-6. Maximum Potential Temporary Impacts to Jurisdictional Drainage Features.**

| Segment                  | Potentially Jurisdictional Drainage Features (linear feet) |                         |  |                              | Potentially Jurisdictional Riparian Vegetation (acres) |                        |  |                          |
|--------------------------|--|-------------------------|--|------------------------------|--|------------------------|--|--------------------------|
|                          | CDFW / EPA / USACE / SWRCB                                 |                         | CDFW / SWRCB<br>Nonwetland<br>Drainages <sup>1</sup> | Total Impacts<br>(linear ft) | CDFW / EPA / USACE / SWRCB                             |                        | CDFW / SWRCB<br>Riparian<br>Vegetation | Total Impacts<br>(acres) |
|                          | Wetland<br>Drainages                                       | Nonwetland<br>Drainages |  |                              | Wetland<br>Vegetation                                  | Riparian<br>Vegetation |  |                          |
| 1                        | 77   | 5,910                   | 2,895  | 8,882                        | 0  | 0.1                    | 0.09                                   | 0.19                     |
| 2                        | 640  | 9,638                   | 11,068   | 21,346                       | 0  | 0.45                   | 0.35                                   | 0.8                      |
| 3                        | 29   | 18,168                  | 18,337   | 36,534                       | 0  | 1.82                   | 0                                      | 1.82                     |
| 4                        | 1,601  | 15,578                  | 2,851  | 20,030                       | 1.27   | 7.46                   | 0.53                                   | 9.26                     |
| 5                        | 0  | 24,562                  | 4,265  | 28,827                       | 0.34   | 34.78                  | 0.82                                   | 35.94                    |
| 6                        | 49   | 13,941                  | 5,306  | 19,296                       | 0  | 0.53                   | 0                                      | 0.53                     |
| <b>Total<sup>2</sup></b> | <b>2,396</b>   | <b>87,797</b>           | <b>44,722</b>  | <b>134,915</b>               | <b>1.6</b>   | <b>45.1</b>            | <b>1.8</b>                             | <b>48.5</b>              |

1 - This total does not include the 0.09 acres measured for catchment basins in developed areas of Segment 1. These basins were determined to be potentially jurisdictional for the CDFW and SWRCB.

2 - Totals do not include the area (i.e., acres) of the drainage features because only one dimensional (i.e., linear feet) data was collected. Therefore, totals do not fully quantify the extent of the effects of the Proposed Project to potentially jurisdictional drainages mapped within the Proposed Project study area. Additionally, many drainage features will be avoided in final engineering plans.

**Clean Water Act and California Fish and Game Code permit compliance.** SCE shall not proceed with any alteration or fill activities in potentially jurisdictional waters until obtaining applicable permits or authorizations, or written agency confirmation that no permit or authorization is required. SCE shall implement all terms or conditions of each permit or authorization. Regardless of any conditions specified in permits or authorizations, SCE shall prevent contaminants or pollutants from entering any state or federal jurisdictional waters.

**Implementation locations:** San Bernardino County (all); WR-MSHCP (all, regardless of SCE's PSE status); CV-MSHCP (all, regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

***Impact VEG-4: Construction, operations, and maintenance activities could cause direct or indirect loss of listed and special-status plants and direct or indirect effects to habitat for listed and special-status plants***

There were no listed threatened or endangered plants located within the Proposed Project study area during field surveys reported in the PEA. One listed species, Coachella Valley milk-vetch (federally listed endangered) could occur in parts of Segment 6, where suitable habitat is present. Its habitat is primarily windblown sand, but also includes fine-grained, loose alluvial sand. In addition, the Proposed Project route crosses designated critical habitat for Coachella Valley milk-vetch in the Whitewater River wash. Coachella Valley milk-vetch is an annual or short-lived perennial that may not germinate or flower in some years, especially years of low rainfall. Thus, while it was not found during field surveys, it may be present in some parts of the ROW in future years, possibly during project construction. No other listed species is likely to occur on the route, based on field surveys and the habitats, geographic ranges, and elevational distributions of other listed species. No other designated critical habitat for plant species is located on the route.

Based on the field surveys and analysis reported in the PEA and on the habitats, geographic ranges, and elevational distributions, several other special-status plants could occur on the route, with probabilities ranging from low to high (see Table Ap.7-1 in Appendix 7). Conservation status for some of these species is California Rare Plant Rank (CRPR) 1B; all CRPR 1B plants are also included in BLM's Sensitive Species list. Other species potentially occurring on the route are ranked as CRPR 2 (rare in California but more common elsewhere) and CRPR 4 ("watch list"). While these plants were not located during field surveys reported in the PEA, there is the possibility that one or more of them may be found during pre-construction surveys to be completed.

The Proposed Project could directly affect Coachella Valley milk-vetch or other special-status plants, should they occur on or near the route, by grading, mowing, or crushing plants during site preparation or other ground-disturbing activities; soil compaction or other habitat effects that may prevent seeds from germinating or becoming established. Potential indirect impact to special-status plants include alterations to upstream or downstream hydrology, leading to alteration of special-status plant habitat (e.g., removing surface or soil water source, or causing inundation of an upland species occurrence); introduction or facilitation of invasive species (particularly Sahara mustard) that may compete with rare plants or alter natural fire regimes or other processes.

The project also could affect native cactus and *Yucca* species. Most native cactus and shrubby *Yucca* species (Joshua tree and Mohave yucca) can be successfully salvaged and transplanted, and loss of these plants would degrade wildlife habitat because *Yuccas* often provide an important vertical component to wildlife habitat.

The Proposed Project could directly or indirectly affect Coachella Valley milk-vetch critical habitat at temporary guard structure locations and associated construction access, but the transmission lines would span the Whitewater River so that no permanent transmission structures or other permanent project facilities would be built within designated critical habitat. The Whitewater River is designated as critical habitat primarily because of its role in fluvial and aeolian sand transport from upstream sources in the San Bernardino Mountains, downstream and downwind to aeolian sand habitat where Coachella Valley milk-vetch is found. The project's potential habitat impacts in the Whitewater River are not likely to affect sand transport, and not likely to substantially affect Coachella Valley milk-vetch (see the discussion of sand transport under Impact VEG-2).

SCE would conduct pre-construction surveys for special-status plants ranked as CRPR 1B and, depending on the extent of expected impacts, mitigate the impact through off-site compensation or, if no suitable occupied habitat is available, through salvage and relocation of the plants. SCE would conduct pre-construction surveys for Coachella Valley milk-vetch and, if it occurs where it would be affected by project construction, then SCE would develop a mitigation plan to include avoidance, protection in place, off-site compensation, salvage and replacement, or a combination of these.

To address potential impacts to federally-listed species, the BLM must consult with the USFWS under Section 7 of the ESA and obtain a Biological Opinion (BO) prior to issuing a notice to proceed for the Proposed Project. Consultation will consist of a Biological Assessment (BA) prepared for the BLM by SCE or their chosen environmental consultant, which will include any conservation measures SCE and BLM propose to avoid and minimize any impacts to federally listed species or critical habitat (including Coachella Valley milk-vetch). The BO may include additional measures deemed reasonable and prudent to protect listed species or critical habitat. If new information (i.e., pre-construction surveys) indicates that the project may affect federally listed plants not addressed in the BA and BO, then reinitiation of Section 7 consultation would be necessary. If pre-construction surveys conclude that state-listed plants may be affected by the project, then SCE must obtain an Incidental Take Permit or Consistency Determination from CDFW according to CESA Sections 2081 or 2080.1.

In addition to the conditions that may be imposed under federal Section 7 consultation, the following mitigation measures would help to reduce or offset project impacts to special-status plants:

- VEG-1a Conduct Biological Monitoring and Reporting
- VEG-1b Prepare and Implement Worker Environmental Awareness Program
- VEG-1c Minimize Native Vegetation and Habitat Loss
- VEG-1d Restore or Revegetate Temporary Disturbance Areas
- VEG-1e Compensate for Permanent Habitat Loss
- VEG-2a Prepare and Implement an Integrated Weed Management Plan

With incorporation of these mitigation measures, some of the potential project impacts to rare plants, including CRPR 2 plants, may not be avoided or mitigated. Mitigation Measure VEG-4a incorporates and supersedes APM BIO-7 and APM BIO-8 by providing additional detail on pre-construction surveys and follow-up mitigation that may be necessary, should the project affect special-status plants.

***Mitigation Measures for Impact VEG-4: Construction, operations, and maintenance activities could cause direct or indirect loss of listed and special-status plants and direct or indirect effects to habitat for listed and special-status plants.***

**VEG-4a Minimize and mitigate impacts to special-status plants.**

**Pre-construction survey.** SCE shall conduct focused surveys for federal- and state-listed and other special-status plants. All special-status plant species (including listed threatened or endangered species, and all CRPR 1A, 1B, 2, 3, and 4 ranked species) impacted by project activities shall be documented in pre-construction survey reports. Surveys shall be conducted during the appropriate season (i.e., when flowering) in all suitable habitat located within the project disturbance areas and access roads and within 100 feet of disturbance areas and access roads, and any additional area where direct or indirect effects to soils or vegetation could affect special-status plants (if present). Surveys shall be conducted by a qualified botanist. The field surveys and reporting must conform to current CDFW botanical field survey protocol (CDFG, 2009) or more recent updates, if available. The reports will describe any conditions that may have prevented previously reported or previously undocumented target species from being located or identified (e.g., poor rainfall, recent grazing, or wildfire). In some cases, follow-up surveys may be necessary to adequately evaluate impacts. Prior to construction, SCE shall submit pre-construction field survey reports along with maps showing locations of survey areas and special-status plants to the CPUC and BLM for review and approval in consultation with CDFW and USFWS.

If federally- or state-listed plants would be affected, SCE shall notify BLM, USFWS, and CDFW to obtain the appropriate permits from CDFW and USFWS and comply with permit requirements. Additional conservation measures to protect or restore listed plant species or their habitat may be required by BLM, CDFW, or USFWS before impacts are authorized.

**Native cactus and *Yucca*.** Most native cactus and shrubby *Yucca* species (Joshua tree and Mohave yucca) can be successfully salvaged and transplanted, and yuccas often provide an important vertical component to wildlife habitat. Therefore, native cactus (excluding chollas in the genus *Cylindropuntia*) and yuccas (excluding chaparral yucca, *Y. whipplei*), shall be avoided or salvaged according to the strategies described below.

**Mitigation.** SCE shall mitigate impacts to any state or federally listed plants or CRPR 1 or 2 ranked plants that may be located on the project disturbance areas or surrounding buffer areas through one or a combination of the following strategies.

Avoidance of special-status plants will be the preferred strategy wherever feasible. Where avoidance is not feasible, and the project would directly or indirectly affect more than 10 percent of a local occurrence,<sup>3</sup> by either number of plants or extent of occupied habitat, SCE shall prepare and implement a mitigation plan to consist of off-site compensation. If off-site compensation is infeasible (e.g., if suitable occupied habitat is not available), then salvage, horticultural propagation, and off-site introduction may be implemented to mitigate the impact.

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<sup>3</sup> An occurrence for a plant is defined as any population or group of nearby populations located more than 0.25 miles from any other population (CDFW, 2009).

- **Avoidance.** Where feasible, towers, access roads, and other project work areas shall be located to avoid impacts to special-status plants. Effective avoidance through project design shall include a buffer area surrounding each avoided occurrence, where no project activities will take place. The buffer area will be clearly staked, flagged, and signed for avoidance prior to the beginning of ground-disturbing activities, and maintained throughout the construction phase. The buffer zone shall be of sufficient size to prevent direct or indirect disturbance to the plants from construction activities, erosion, inundation, or dust. The size of the buffer will depend upon the proposed use of the immediately adjacent lands and the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, water availability, edaphic physical and chemical characteristics), to be specified by a qualified botanist. At minimum, the buffer for trees or shrubs species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems. The buffer for herbaceous species shall be a minimum of 50 feet from the perimeter of the occupied habitat or the individual. If a smaller buffer is necessary due to other project constraints, SCE will develop and implement site-specific monitoring and put other measures in place to avoid the take of the species, with the approval of the CPUC and BLM, in consultation with USFWS and CDFW.
- **Off-site compensation.** SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plants at a 1:1 ratio of acreage and number of plants for any occupied habitat affected by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence and a surrounding 100-foot buffer area. Off-site compensation shall be incorporated into the project's Habitat Compensation Plan (under Mitigation Measure VEG-1e), for review and approval by the CPUC and BLM in consultation with CDFW and USFWS.
- **Salvage.** SCE shall consult with horticultural experts at regional institutions such as Rancho Santa Ana Botanic Garden (RSABG) regarding the feasibility and likely success of salvage and relocation efforts for each species to be salvaged. If salvage is deemed to be feasible, based on prior success with the species, then SCE shall prepare and implement a Special-status Plant Salvage and Relocation Plan, to be reviewed and approved by the CPUC and BLM, in consultation with CDFW, USFWS, and the horticultural expert, prior to direct or indirect disturbance of any occupied habitat. For special-status plants, the goal shall be establishment of a new viable occurrence, equal or greater in extent and numbers to the affected occurrence. For cacti and yuccas, the goal shall be maximum practicable survivorship of salvaged plants. The Plan will include at minimum: (a) species and locations of plants identified for salvage; (b) criteria for determining whether an individual plant is appropriate for salvage and relocation; (c) the appropriate season for salvage; (d) equipment and methods for collection, transport, and re-planting plants or recreating seed banks, to retain intact soil conditions and maximize success; (e) for shrubs, cacti, and yucca, a requirement to mark each plant to identify the north-facing side prior to transport, and replant it in the same orientation; (f) details regarding storage of plants or seed banks for each species; (g) location of the proposed recipient site, and detailed site preparation and plant introduction techniques for top soil storage, as applicable; (h) a description of the irrigation, weed control, and other maintenance activities; (i) success criteria, including specific timeframe for survivorship and reproduction of each species; and (j) a detailed monitoring program, commensurate with the Plan's goals.



Quarterly and annual monitoring reports shall be submitted to CPUC and BLM. Reports shall include, but not be limited to, details of plants salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation.

- **Horticultural propagation and off-site introduction.** If salvage and relocation is not believed to be feasible for special-status plants, then SCE shall consult with RSABG, or another qualified entity, to develop an appropriate experimental propagation and relocation strategy, based on the life history of the species affected. The Plan will include at minimum: (a) collection and salvage measures for plant materials (e.g., cuttings), seed, or seed banks, to maximize success likelihood; (b) details regarding storage of plant, plant materials, or seed banks; (c) location of the proposed propagation facility, and proposed methods; (d); time of year that the salvage and other practices will occur; (e) success criteria; and (f) a detailed monitoring program, commensurate with the Plan's goals.

**Implementation locations outside of MSCHPs:** This mitigation measure shall apply to all lands in San Bernardino County, on all BLM lands, and they are recommended for implementation on Morongo Tribal Lands.

**Implementation locations for WR-MSHCP and CV-MSHCP:** If SCE does not obtain PSE status under the WR-MSHCP or CV-MSHCP, this mitigation measure shall apply in its entirety within the relevant MSHCP area. The Pre-construction Survey and Native Cactus and Yucca portions of this mitigation measure shall apply within both MSHCP areas regardless of SCE's PSE status. If SCE obtains PSE status under either MSHCP, mitigation for the project's impacts to special-status plants covered under the Plan may be implemented according to the requirements of the MSHCP, and the remainder of this mitigation measure will not apply within the MSHCP area for species covered under the Plan. For potential impacts to special-status plants not covered under the Plan, this measure will apply in full.

***Impact VEG-5: Construction, operations, and maintenance activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, state, or federal conservation plans***

**Tree Removal.** The Proposed Project area spans the following cities that have tree protection or preservation policies or ordinances: Banning, Beaumont, Calimesa, Colton, Grand Terrace, Loma Linda, and Redlands. With the exception of oak tree protection in the City of Calimesa, these ordinances apply to street trees and require replacement of trees removed. In addition, San Bernardino County regulates the removal of trees (including landscaping trees and native trees in open space areas) in unincorporated County lands, and Riverside County regulates the removal of oak trees in unincorporated areas. The BLM requires authorization for removal of cactus or *Yucca* plants from BLM lands. The PEA states that any street trees that are removed for the Proposed Project would be replaced by SCE in accordance with the applicable ordinance. Segment 4 construction activities conducted in the City of Calimesa near San Timoteo Canyon would require trimming or removal of oak trees. SCE anticipates that trees could be impacted at approximately six structure site locations and along portions of the existing access roads. The PEA states that SCE would identify any trees that would interfere with construction and would consult with local municipalities prior to any tree alteration or removal.

Operation and maintenance activities would require periodic trimming of trees to ensure safe operation of the subtransmission lines and to ensure access for routine and emergency maintenance. These activities would be similar to existing conditions and would have no new impacts to local policies or ordinances protecting biological resources.

Mitigation Measure VEG-5a (Comply with local tree removal or resource protection policies) would require SCE to obtain permits from local jurisdictions and BLM for tree removal or other plant removal or harvest, in accordance with each applicable ordinance or policy.

**Western Riverside-MSHCP.** Approximately one half of the Proposed Project route (Segments 3, 4, and non-reservation lands in the western portion of Segment 5) is located within the WR-MSHCP planning area. SCE is not a signatory to the WR-MSHCP; however SCE intends to apply for PSE status for the Proposed Project to receive take authorization for covered species within the Plan Area, subject to conditions of applicable state and federal authorizations and the WR-MSHCP Implementing Agreement. Under the WR-MSHCP, SCE would be required to prepare a WR-MSHCP Consistency Analysis to demonstrate compliance with criteria cell requirements, survey species requirements, and to disclose how impacts to public and quasi-public (PQP) lands and existing Additional reserve Lands (ARLs) ARLs would be compensated by purchase and/or dedication of additional lands into the MSHCP Conservation Area.

If SCE does not obtain PSE status, then no take would be authorized under the MSHCP, and separate ESA and CESA authorizations would be required. The mitigation measures for vegetation and wildlife impacts specified in this section (VEG-1a through VEG-1e, VEG-2a, VEG-3a, and VEG-4a) and Mitigation Measures WIL-2a through WIL-2k (see Section D.5.2) would be required. With implementation of these measures, the project would be consistent with the general conservation goals of the WR-MSHCP. However, the Proposed Project would permanently affect up to 23.9 acres of PQP lands and temporarily affect up to 161.8 acres of PQP lands that are designated for conservation. In addition, the Proposed Project may permanently affect up to 21.9 acres of ARLs and temporarily affect up to 143.6 acres of ARLs. The majority of these lands are within Segments 3 and 4. The Proposed Project would also be required to comply with Urban Wildland Interface Guidelines to minimize indirect effects to any adjacent conservation areas. The Proposed Project route passes through 21 criteria cells. The Proposed Project would permanently affect 74.8 acres within 18 criteria cells and would temporarily affect 417.3 acres within 21 criteria cells. These impacts could affect the WR-MSHCP's overall conservation success.

Most of the Proposed Project area is within ROW that pre-dates the WR-MSHCP, and the WR-MSHCP recognizes the need for infrastructure projects. Therefore, potential conflicts with the WR-MSHCP, even if SCE does not obtain PSE status, are expected to be minor. If SCE does not obtain PSE status, Mitigation Measure VEG-5b (Ensure MSHCP equivalency and consistency) would require SCE to prepare an analysis equivalent to the WR-MSHCP Consistency Analysis. Potential conflicts or inconsistencies with the WR-MSHCP could include: (1) adverse effects to vegetation or habitat within reserve areas or high-priority potential reserve areas; (2) insufficient or ineffective compensation to offset impacts according to the MSHCP design; or (3) incomplete presence/absence documentation in covered species habitat. Should the Consistency Analysis identify one or more of these potential conflicts, it shall specify detailed measures to prevent or rectify such conflict through site-specific design revisions (within the existing ROW), additional habitat compensation, additional field surveys for covered species, or other comparable measures.

By implementing measures to be specified in the analysis, any potential conflict with the WR-MSHCP would be avoided. The analysis shall be subject to review and approval by CPUC and BLM, in consultation with CDFW, USFWS, and the Western Riverside County Regional Conservation Authority.

**Coachella Valley MSHCP.** SCE is not a signatory to the CV-MSHCP; however SCE intends to apply for PSE status in the CV-MSHCP to receive take authorization for covered species within the Plan Area, subject to conditions of applicable state and federal authorizations. Proposed Project components that are within CV-MSHCP conservation areas are subject to Joint Project Review process with the Coachella Valley Conservation Commission (CVCC), to allow the CVCC to facilitate and monitor implementation of the CV-MSHCP. If SCE does not obtain PSE status, then no take would be authorized under the MSHCP, and separate ESA and CESA authorizations would be required. The mitigation measures for vegetation and wildlife impacts specified in this section (VEG-1a through VEG-1e, VEG-2a, VEG-3a, and VEG-4a) and Mitigation Measures WIL 2a through WIL 2k (see Section D.5.2) would be required. With implementation of these measures the project would be consistent with the general conservation goals of the CV-MSHCP. The Proposed Project would permanently affect 23.2 acres and temporarily affect 174.3 acres of the Stubbe and Cottonwood Canyons Conservation Area; it would permanently affect 1.8 acres and temporarily affect 25.2 acres of the Whitewater River Conservation Area; and it would permanently affect 8.8 acres and temporarily affect 84.7 acres of the Upper Mission Creek/Big Morongo Canyon Conservation Area. Thus, the Proposed Project will be subject to CVCC review.

In general, the Proposed Project would not conflict with the CV-MSHCP. Most of the Proposed Project is within ROW that pre-dates the CV-MSHCP (except a portion of the alignment at the eastern margin of the CV-MSHCP area). Therefore, potential conflicts with the CV-MSHCP, even if SCE does not obtain PSE status, are expected to be minor. The CV-MSHCP recognizes the need for infrastructure projects. If SCE does not obtain PSE status, Mitigation Measure VEG-5b would require SCE to prepare an analysis equivalent to the CV-MSHCP Joint Project Review requirements. Potential conflicts or inconsistencies with the CV-MSHCP could include: (1) adverse effects to vegetation or habitat within reserve areas or high-priority potential reserve areas; (2) insufficient or ineffective compensation to offset impacts according to the MSHCP design; or (3) incomplete presence/absence documentation in covered species habitat. Should the Joint Project Review identify one or more of these potential conflicts, it shall specify detailed measures to prevent or rectify such conflict through site-specific design revisions (within the existing ROW), additional habitat compensation, additional field surveys for covered species, or other comparable measures. By implementing measures to be specified in the analysis, any potential conflict with the WR-MSHCP would be avoided. The analysis shall be subject to review and approval by CPUC and BLM, in consultation with CDFW, USFWS, and the CVCC.

***Mitigation Measures for Impact VEG-5: Construction, operations, and maintenance activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, state, or federal conservation plans.***

**VEG-5a**     **Comply with local tree removal or resource protection policies.** SCE shall obtain permits from local jurisdictions and BLM for tree removal and other plant removal or harvest, in accordance with each applicable ordinance or policy, prior to removal or other impacts to regulated trees or other plants.

**Implementation locations:** San Bernardino County (all); WR-MSHCP (all, regardless of SCE's PSE status); CV-MSHCP (all, regardless of SCE's PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

**VEG-5b**     **Ensure MSHCP consistency.** If SCE does not obtain PSE status under either the WR-MSHCP or CV-MSHCP, SCE shall prepare an analysis equivalent to the WR-MSHCP Consistency Analysis or the CV-MSHCP Joint Project Review Requirements, as appropriate. This analysis shall

identify any potential conflict with the WR-MSHCP or CV-MSHCP and specify detailed measures that SCE will implement, as a non-participant in either plan, to prevent such conflict through habitat compensation or other measures. The analysis and its included specifications for avoiding MSHCP conflicts shall be subject to review and approval by CPUC and BLM, in consultation with CDFW, USFWS, the Western Riverside County Regional Conservation Authority, and the CVCC. The analysis and full implementation of each measure shall be completed prior to the start of any ground-disturbing activity within the WR-MSHCP or CV-MSHCP area.

**Implementation locations:** WR-MSHCP (all, if SCE does not obtain PSE status); CV-MSHCP (all, if SCE does not obtain PSE status); BLM (all); reservation (recommended for all Morongo Tribal Lands).

#### **D.4.3.4 Impacts of Connected Actions**

This section identifies and describes the expected impacts to vegetation resources of those projects identified as connected actions. This impact analysis is based on the vegetation resources described in the Environmental Setting for Connected Actions (Section D.4.1.3) and on the Descriptions of Connected Projects (Section B.7.2). Each project would be subject to review, approval under CEQA, NEPA, or both (depending on specific location and jurisdiction), and required mitigation measures would be imposed by the lead agencies.

##### ***Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats***

Depending on its location, the connected project could affect native vegetation and habitat on public or private lands, or could affect primarily disused agricultural lands or other previously disturbed sites. To the extent that the project site may consist of native vegetation and habitat, project development would eliminate that habitat as described in Impact VEG-1 for the Proposed Project. Depending on its location, the connected projects could affect aeolian sand habitat or other sensitive natural communities.

This impact can be minimized through on-site measures such as mitigation measures specified in the Desert Harvest Solar Project (DHSP) FEIS (BLM, 2012): minimize project disturbance areas, require biological monitoring, and specify revegetation of temporarily disturbed areas. Depending on the project location, its vegetation and habitat impacts would probably be subject to the Coachella Valley MSHCP (CV-MSHCP). Under the CV-MSHCP, the project owner would provide funding to offset project impacts through Plan's habitat acquisition and protection strategy. If the connected project is not subject to the CV-MSHCP, then permanent habitat impacts could be offset through habitat acquisition and protection such as described in the DHSP FEIS.

**Desert Center Area.** There are four solar projects in the Desert Center area identified as connected actions: the Palen Solar Power Project, the Desert Harvest Solar Project, and two confidential projects. The two confidential projects have an estimated ground disturbance of 400 acres and 2,000 acres, respectively. It is assumed the gen-tie line for each project would be a single-circuit 220 or 230 kV line, generally running along existing corridors.

Depending on their locations, the connected projects could affect native vegetation and habitat on public or private lands, or could affect primarily disused agricultural lands or other previously disturbed sites. To the extent that the project sites may consist of native vegetation and habitat, project development would eliminate that habitat as described in Impact VEG-1 for the Proposed Project. Depending on their location, the connected projects could affect aeolian sand habitat, desert dry wash woodland, or other sensitive natural communities.

This impact can be minimized through on-site measures such as mitigation measures specified in the DHSP FEIS: minimize project disturbance areas, require biological monitoring, and specify revegetation of temporarily disturbed areas. Permanent habitat impacts could be offset through habitat acquisition and protection such as described in the DHSP FEIS.

The Palen Solar Power Project would cover approximately 4,000 acres of undeveloped open space consisting of primarily native vegetation. Conditions of Certification that would mitigate the project's impacts to vegetation resources may be found in the CEC decision document for the project (CEC, 2010, Section VI.A). The project would result in permanent loss of Sonoran creosote bush scrub and fragmentation of adjacent native plant communities. This impact would be mitigated through implementation of Conditions of Certification BIO-12 (Desert tortoise compensatory mitigation), BIO-8 (Impact avoidance and minimization measures), and BIO-14 (Weed Management Plan). The project would also result in permanent loss of stabilized and partially stabilized dune habitat and disruption of a sand transport corridor resulting in downwind impacts to sand dune habitat. These impacts would be mitigated through implementation of Conditions of Certification BIO-20 (Sand dune/Mojave fringe-toed lizard mitigation).

An additional impact would be permanent loss of desert dry wash woodland. This impact would be mitigated through Conditions of Certification BIO-21 (Mitigation for impacts to state waters), BIO-14 (Weed Management Plan), and acquisition and enhancement of land containing ephemeral desert washes. CEC (2010, Section VI.A.) A further impact would be adverse effects to groundwater-dependent plant communities near Palen Dry Lake as a result of groundwater withdrawal. This impact would be mitigated through Conditions of Certification BIO-23 (Groundwater-dependent vegetation monitoring), BIO-24 (Remedial action and compensation for adverse effects to groundwater-dependent biological resource), and BIO-7 (Biological Resources Mitigation Implementation and Monitoring Plan).

The Desert Harvest Solar Project would occupy approximately 1,200 acres of undeveloped, natural open space consisting of primarily native vegetation. The project would result in permanent loss of Sonoran creosote bush scrub and desert dry wash woodland and adverse effects to desert dry wash woodland as a result of groundwater withdrawal. Mitigation measures for impacts to vegetation resources may be found in BLM's EIS for the project (2012, Section 4.3). This impact would be mitigated through implementation of Mitigation Measures VEG-2 (Biological monitoring and reporting), VEG-4 (Minimize construction-related impacts), VEG-5 (Vegetation Resources Management Plan), VEG-6 (Off-Site compensation for impacts to vegetation and habitat), and VEG-10 (Desert Dry Wash Woodland Monitoring and Reporting Plan).

**Blythe Area.** The connected solar projects in the Blythe area are three confidential projects with ground disturbance estimated at 1,200 acres, 1,200 acres, and 1,800 acres, respectively. It is assumed the gentle line for each project would be a single-circuit 220 or 230 kV line, generally running along existing corridors.

Depending on their locations, the connected projects could affect native vegetation and habitat on public or private lands, or could affect primarily disused agricultural lands or other previously disturbed sites. To the extent that the project sites may consist of native vegetation and habitat, project development would eliminate that habitat as described in Impact VEG-1 for the Proposed Project. Depending on their location, the connected projects could affect desert dry wash woodland or other sensitive natural communities.

This impact can be minimized through on-site measures such as mitigation measures specified in the DHSP FEIS (BLM 2012, Sections 3.4 and 4.4): minimize project disturbance areas, require biological monitoring, and specify revegetation of temporarily disturbed areas. Permanent habitat impacts could be offset through habitat acquisition and protection such as described in the DHSP FEIS.

***Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds***

**Desert Center Area.** Depending on their location, the two confidential connected projects in the Desert Center area could affect native sand transport and surface water flows on public or private lands. Construction activities could create dust and facilitate the introduction and spread of invasive weeds. To the extent that the project would result in these indirect impacts, project development would affect native vegetation and habitat as described in Impact VEG-2 for the Proposed Project.

This impact can be minimized through on-site measures such as mitigation measures specified in the DHSP FEIS (BLM, 2012, Section 4.3): implement plans for weed management, fugitive dust control, and surface water protection. Downwind impacts to aeolian sand habitat from interrupted sand transport can be mitigated through a measure similar to that specified in the Palen PMPD (CEC, 2010, Section VI.A) Conditions of Certification BIO-20 (Sand dune/Mojave fringe-toed lizard mitigation). Additionally, if the project is located on BLM land, that agency requires implementation of an Integrated Weed Management Plan.

Construction activities for the Palen Solar Power Project would create dust and facilitate the introduction and spread of invasive weeds. The project would also result in direct and indirect impacts to numerous ephemeral streams and washes that occur on the project site and disruption of a sand transport corridor resulting in downwind impacts to sand dune habitat. These impacts would be mitigated through implementation of Conditions of Certification AQ-SC3 (Construction fugitive dust control), AQ-SC7 (Operations Dust Control Plan), BIO-8 (Impact avoidance and minimization measures), BIO-14 (Weed Management Plan), BIO-21 (Mitigation for impacts to state waters), and BIO-20 (Sand dune/Mojave fringe-toed lizard mitigation). (CEC, 2010, Section VI.A.)

Construction of the Desert Harvest Solar Project would be expected to create dust, affect surface water flow, and introduce or facilitate the spread of invasive non-native plants. These impacts would be mitigated through implementation of Mitigation Measures AIR-1 (Fugitive Dust Control Plan), WAT-4 (Surface Water Protection Plan and Drainage Design Specifications), VEG-8 (Implement Best Management Practices to Minimize Impacts to Jurisdictional Areas), and VEG-9 (Integrated Weed Management Plan). The project would not interrupt aeolian sand transport. (BLM 2012, Sections 3.3 and 4.3)

**Blythe Area.** Depending on the locations of the three projects in the Blythe area, development could affect sand transport and surface water flows on public or private lands. Construction activities could create dust and facilitate the introduction and spread of invasive weeds. To the extent that the projects would result in these indirect impacts, project development would affect native vegetation and habitat as described in Impact VEG-2 for the Proposed Project.

This impact can be minimized through on-site measures such as mitigation measures specified in the DHSP FEIS: implement a weed management plan, fugitive dust control plan, and surface water protection plan. Downwind impacts to aeolian sand habitat from interrupted sand transport can be mitigated through a measure similar to that specified in the Palen PMPD (CEC, 2010, Section VI.A) Conditions of Certification BIO-20 (Sand dune community impact mitigation). Additionally, if the project is located on BLM land, that agency requires implementation of an Integrated Weed Management Plan.

***Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality***

**Common to All Areas.** For each area with a connected action project, any project impacts to waters of the State or waters of the U.S. would be subject to permitting under the California Fish and Game Code and federal Clean Water Act (CWA).

If there are any jurisdictional waters on the project site, project development could affect jurisdictional waters as described in Impact VEG-3 for the Proposed Project. This impact can be minimized through on-site measures such as mitigation measures specified in the DHSP FEIS: require biological monitoring and implement a Habitat Mitigation and Monitoring Plan (HMMP) describing proposed mitigation and compensation ratios for affected jurisdictional waters. Potential impacts to jurisdictional drainages also would be reduced through implementation of a Storm Water Pollution Prevention Plan (SWPPP) including Best Management Practices (BMPs) and compliance with the conditions set forth in State and federal permits.

**Desert Center Area.** Most projects in this area, including the Desert Harvest and Palen projects, would not be subject to permitting under the federal Clean Water Act because watersheds in the area are within closed basins that do not fall under jurisdiction as waters of the U.S. However, intermittent streambeds and lakebeds (generally including desert washes and dry lakes) in the Desert Center area are jurisdictional as waters of the State, subject to permitting under Section 1600-1616 of the California Fish and Game Code. The measures identified above as common to all areas would apply.

The Palen Solar Power Project would result in direct and indirect impacts to numerous ephemeral streams and washes that occur on that project site. (CEC, 2010, Section VI.A) This impact would be mitigated through Conditions of Certification BIO-21 (), as well as BIO-7 (biological resources mitigation implementation and monitoring plan) and BIO-8 (impact avoidance and minimization measures).

No wetlands or waters of the U.S. occur on the Desert Harvest Solar Project, but the project would impact state-jurisdictional streambeds. These impacts would be offset by implementing Mitigation Measures VEG-2 (Biological monitoring), VEG-4 (Minimize construction-related impacts), VEG-5 (Vegetation Resources Management Plan), VEG-6 (Off-Site Compensation for Impacts to Vegetation and Habitat), VEG-8 (Implement best management practices to minimize impacts to jurisdictional areas), and WAT-1 (Demonstrate compliance with water quality permits). (BLM 2012, Sections 3.3 and 4.3)

**Blythe Area.** The three solar projects in the Blythe area could affect jurisdictional waters. Impacts to jurisdictional waters, including intermittent channels, also could affect downstream wetlands, riparian, or aquatic habitat and the biological resources found in those downstream habitats. The measures identified above as common to all areas would apply.

***Impact VEG-4: Construction, operations, and maintenance activities could cause direct or indirect loss of listed and special-status plants and direct or indirect effects to habitat for listed and special-status plants***

**Common to All Areas.** This impact could occur in each area and can be minimized through on-site measures such as mitigation measures specified in the DHSP FEIS: minimize project disturbance areas, require biological monitoring, implement a Vegetation Resources Management Plan, and mitigate direct effects to special-status plants. If the project site is on BLM land or has another federal nexus, the BLM or other agency would conduct an ESA Section 7 consultation for federally listed plant species. The resulting USFWS Biological Opinion (BO) may contain additional required measures. Similarly, a state Incidental Take Permit may be required and may contain additional measures.

**Desert Center Area.** Depending on their location, the two confidential connected projects could affect native vegetation and habitat, including special-status plants and their habitat. To the extent that special-status plants occur on the project sites, project development could affect special-status plants and their habitat as described in Impact VEG-4 for the Proposed Project. The measures identified above as common to all areas would apply.

The Palen Solar Power Project would not impact any federal- or state-listed plant species. The project would directly or indirectly impact five non-listed special-status plant species: Harwood's woollystar, Harwood's milk-vetch, California ditaxis (*Ditaxis serrata* var. *californica*; CRPR 3.2), ribbed cryptantha (*Cryptantha costata*; CRPR 4.3), and Palen Lake saltbush (*Atriplex* sp. nov. Andre; potential new taxon, no CDFW status as yet). (CEC, 2010, Section VI.A.)

Impacts to special-status plants would be avoided, minimized, and mitigated through implementation of Conditions of Certification BIO-8 (Impact avoidance and minimization measures), BIO-14 (Weed Management Plan), BIO-19 (Special-status plant impact avoidance, minimization and compensation), BIO-20 (Sand dune/Mojave fringe-toed lizard mitigation), BIO-21 (Mitigation for impacts to state waters), BIO-22 (Decommissioning and Reclamation Plan), and BIO-23 (Groundwater-dependent vegetation monitoring ) and BIO-24 (Remedial action and compensation for adverse effects to groundwater-dependent biological resources).

The Desert Harvest Solar Project would not impact any federal- or state-listed plant species. The project would impact three non-listed special-status species: Crucifixion thorn, Utah vine milkweed, and desert unicorn-plant. Impacts to special-status plants would be avoided, minimized, and mitigated through implementation of Mitigation Measures VEG-2 (Biological monitoring), VEG-4 (Minimize construction-related impacts), VEG-7 (Mitigate direct impacts to special-status plants), and VEG-9 (Integrated Weed Management Plan). (BLM, 2012, Section 4.3)

**Blythe Area.** Depending on location, the connected projects could affect native vegetation and habitat, including special-status plants and their habitat. To the extent that special-status plants occur on project sites, project development could affect special-status plants and their habitat as described in Impact VEG-4 for the Proposed Project. The measures identified above as common to all areas would apply.

***Impact VEG-5: Construction, operations, and maintenance activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, state, or federal conservation plans***

**Common to All Areas.** In each area, if the project site is on BLM land, BLM policy requires salvage and re-planting of yuccas and cacti. The project may also be subject to compliance with other local policies (e.g., tree protection ordinances). To the extent that the project sites would be subject to local ordinances, conservation plans, etc., compliance would be required as described in Impact VEG-5 for the Proposed Project.

**Desert Center Area.** The Palen Solar Power Project (Reduced Acreage Alternative) is located on BLM land. Condition of Certification BIO-8 (Impact avoidance and minimization measures), BIO-14 (Weed Management Plan), and BIO-22 (Decommissioning and Reclamation Plan) mitigates impacts to cacti, yucca, and native trees. (CEC, 2010, Section VI.A.)

The Desert Harvest Solar Project also is located on BLM land and is subject to the BLM requirement to salvage yuccas and cacti. Mitigation Measure VEG-5 (Vegetation Resources Management Plan) addresses this requirement. (BLM, 2012, Section 4.3)

**Blythe Area.** The measures identified above as common to each area would apply.



## D.4.4 Environmental Impacts of Project Alternatives

Three alternatives are considered in this section, and the No Action Alternative is evaluated in Section D.4.5. All of these alternatives would be located within the existing WOD ROW. Alternatives are described in detail in Appendix 5 (Alternatives Screening Report) and are summarized in Section C.

Vegetation and habitat within the ROW are described by segment in Section D.4.1.2 above; the description of the environmental setting would apply equally to the alternatives.

### D.4.4.1 Tower Relocation Alternative

The Tower Relocation Alternative would locate certain transmission structures in Segments 4, 5, and 6 farther from existing homes than would be the case under the Proposed Project.

Five impacts related to vegetation and habitat were identified for the Proposed Project. These impacts also would apply to the Tower Relocation Alternative, which overall would be the same as the Proposed Project, with the exception of the relocated transmission towers that are described above and in Appendix 5. The full text of all vegetation and habitat mitigation measures (“VEG”) referenced in this section is presented in Section D.4.3.3. The full text of air quality mitigation measures (“AQ”) is presented in Section D.3.3.3 and water resources mitigation measures (“WR”) in Section D.19.3.3.

The only difference between the Proposed Project and this alternative would be the relocation of selected structures in Segments 4, 5, and 6. All other structures as identified under the Proposed Project. In general, the relocated towers would be moved approximately 50 feet farther from the southern edge of the ROW.

#### ***Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats***

Road construction and improvements, and site preparation for transmission structure demolition or construction, pull sites, staging areas, equipment yards, parking areas, administrative functions, and other project activities would remove existing vegetation and habitat. Adverse effects to vegetation and habitat would occur primarily during project construction. These effects may be temporary or permanent. Examples of permanent impacts are removal of vegetation for permanent roads and access areas at each structure.

Under the Tower Relocation Alternative, the minor adjustment to the location of the affected towers in Segments 4, 5, and 6 would require land clearing at the new locations, but would not require clearing at the former locations of these towers under the Proposed Project. This clearing would result in loss or degradation of vegetation and habitat similar to the Proposed Project, only at a somewhat different location. The impacts of the Tower Relocation Alternative, compared to existing conditions, would be similar to the Proposed Project as analyzed in Section D.4.3.3.

As with the Proposed Project, construction, post-construction restoration, and O&M activities for the Tower Relocation Alternative would necessitate temporary and permanent removal of vegetation and habitat as shown in Table D.4-4. The adverse effect on vegetation and habitat due to land clearing for this alternative would be similar to the Proposed Project. There may be minor differences in total acreages of habitat types impacted, but as described above, would not exceed the amounts previously analyzed for the Proposed Project. Impacts to vegetation and habitat would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and imple-

ment worker environmental awareness program [WEAP]), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), and VEG-1e (Compensate for permanent habitat loss).

***Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds***

In addition to the direct impacts to native vegetation and habitat, the construction, restoration, and O&M activities associated with the project could have several indirect impacts to surrounding vegetation and habitat. These impacts may include dust caused by project activities or vegetation removal, interruption of windblown sand transport to downwind habitat, interruption of surface flows and water or sediment supply to downstream habitat, and the introduction or spread of invasive species. The extent and severity of these indirect habitat effects would depend on the sensitivity of adjacent habitat and the plants or wildlife it supports. O&M activities associated with the Proposed Project with the Tower Relocation Alternative are expected to be less than or equivalent to O&M of the existing West of Devers system and impacts would be similar to or reduced from existing conditions.

Under the Tower Relocation Alternative, the minor adjustment to the location of the affected towers would not increase the indirect degradation of surrounding vegetation compared to the Proposed Project. However, the construction timeframe will be extended by as much as one year, with additional dust and invasive weed impacts. With the exception of dust and invasive weeds, as described below, the impacts of the Tower Relocation Alternative, compared to existing conditions, would be similar to the Proposed Project as analyzed in Section D.4.3.3.

**Dust.** Disturbed soils would be exposed for much of the construction and restoration phases, leading to increased wind erosion and dust generation. Extending the construction time frame in the affected areas will leave disturbed soils exposed for an additional period of time.

Mitigation Measures AQ-1a (Control fugitive dust), AQ-1b (Control off-road equipment emissions), WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and VEG-1d (Restore or revegetate temporary disturbance areas) would minimize generated dust and its indirect effects to vegetation and habitat. With implementation of these mitigation measures, the additional dust impacts associated with the Tower Relocation Alternative, as compared to the Proposed Project, would be minimized (Class II).

**Sand transport.** The portion of the ROW affected by this alternative is not within sand source or sand transport areas as mapped in the CV-MSHCP. The minor adjustment to the location of the affected towers would not increase impacts to sand transport as compared to the Proposed Project.

**Surface water flow.** With implementation of APM HYDRO-1 (see Table B-18) and Mitigation Measures WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), VEG-1a (Conduct biological monitoring and reporting), VEG-1d (Restore or revegetate temporary disturbance areas), and VEG-1e (Compensate for permanent habitat loss), the impacts of the Tower Relocation Alternative on surface hydrology would be minimized, and would be similar to the Proposed Project.

**Invasive weeds.** Extending the construction time frame in the affected areas will leave disturbed soils exposed for an additional period of time, creating more opportunities for invasion and spread of weeds. With implementation of VEG-2a (Prepare and implement an Integrated Weed Management Plan), the additional invasive weed impacts associated with the Tower Relocation Alternative, as compared to the Proposed Project, would be minimized.

***Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality***

The Proposed Project would affect jurisdictional waters of the State or waters of the U.S., and all project impacts to waters of the State or waters of the U.S. (including construction, restoration, and O&M phases) will be subject to permitting under the California Fish and Game Code and federal Clean Water Act (CWA). The Tower Relocation Alternative for reposition certain sets of towers in Segments 4, 5, and 6, as compared to their locations under the Proposed Project. These would be minor relocations and none expected to affect jurisdictional waters and wetlands.

Potential impacts to jurisdictional drainages would be reduced through implementation of a Storm Water Pollution Prevention Plan (SWPPP) including Best Management Practices (BMPs) as described in Section 4.9 of the PEA (see page 4.9-21), and compliance with the conditions set forth in State and federal permits or authorizations (California Fish & Game Code Sections 1600-1616 and CWA Sections 401 and 404). In addition, Mitigation Measures WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), and VEG-3a (Minimize impacts and ensure no net loss for jurisdictional waters and wetlands) would further minimize or mitigate the effects of surface hydrology alterations. With implementation of permit conditions and mitigation measures, the adverse impacts of the Tower Relocation Alternative on biological resources within jurisdictional waters would be avoided or mitigated, and would be similar to the Proposed Project. The impacts of the Tower Relocation Alternative, compared to existing conditions, would be similar to the Proposed Project as analyzed in Section D.4.3.3.

***Impact VEG-4: Construction, operations, and maintenance activities could cause direct or indirect loss of listed and special-status plants and direct or indirect effects to habitat for listed and special-status plants***

There were no listed threatened or endangered plants identified within the Proposed Project study area during field surveys reported in the PEA. One listed species, Coachella Valley milk-vetch (federally listed endangered) could occur in parts of Segment 6, where suitable habitat is present. Its habitat is primarily windblown sand, but also includes fine-grained, loose alluvial sand. In addition, the Proposed Project route crosses designated critical habitat for Coachella Valley milk-vetch in the Whitewater River wash. Coachella Valley milk-vetch is an annual or short-lived perennial that may not germinate or flower in some years, especially years of low rainfall. Thus, while it was not found during field surveys, it may be present in some parts of the ROW in future years, possibly during project construction. No other listed species is likely to occur on the route, based on field surveys and the habitats, geographic ranges, and elevational distributions of other listed species. No other designated critical habitat for plant species is located on the route.

The Proposed Project with the Tower Relocation Alternative could directly affect special-status plants, should they occur on or near the route. SCE would conduct pre-construction surveys for special-status plants and mitigate the impact through avoidance, protection in place, salvage and relocation, or salvage and replacement.

In addition, the following mitigation measures would help to reduce or offset project impacts to special-status plants: VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement Worker Environmental Awareness Program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habi-

tat loss), and VEG-2a (Prepare and implement an Integrated Weed Management Plan). Mitigation Measure VEG-4a (Minimize and mitigate impacts to special-status plants) details follow-up mitigation that may be necessary, should the project affect special-status plants. With implementation of permit conditions and mitigation measures, the impacts of the Tower Relocation Alternative on special-status plants would be minimized or mitigated, and would be similar to the Proposed Project. The impacts of the Tower Relocation Alternative, compared to existing conditions, would be similar to the Proposed Project as analyzed in Section D.4.3.3.

***Impact VEG-5: Construction, operations, and maintenance activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, state, or federal conservation plans***

Impacts of the Tower Relocation Alternative regarding local tree or plant protection policies or ordinances are the same as the Proposed Project. These addressed by Mitigation Measure VEG-5a (Comply with local tree removal or resource protection policies). Impacts of this alternative regarding the WR-MSHCP and CV-MSHCP is addressed by Mitigation Measure VEG-5b (Ensure MSHCP equivalency and consistency), and would be the same as the Proposed Project.

#### **D.4.4.2 Iowa Street 66 kV Underground Alternative**

The Iowa Street 66 kV Underground Alternative would modify the Proposed Project by placing a 1,600-foot segment of subtransmission line underground, rather than overhead. Except for the underground segment of 66 kV subtransmission line in Iowa Street, this alternative would require the same structures and construction as the Proposed Project and would have the same impacts. The only difference would be the impacts in this 1,600-foot segment.

Five impacts were identified under the Proposed Project for vegetation and habitat. These impacts also would apply to the Iowa Street 66 kV Underground Alternative, and overall would be the same as the Proposed Project except for the underground portion of the subtransmission line. The full text of all vegetation and habitat mitigation measures (“VEG”) referenced in this section is presented in Section D.4.3.3. The full text of air quality mitigation measures (“AQ”) is presented in Section D.3.3.3 and water resources mitigation measures (“WR”) in Section D.19.3.3.

***Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats***

This alternative would place a 1,600-foot segment of 66 kV subtransmission line underground instead of on overhead poles. This underground segment would be within or immediately adjacent to an existing paved street (Iowa Street) and would not require any clearing of native vegetation. This alternative would eliminate the need for 7 poles needed to support an overhead line and slightly decrease the temporary and permanent impacts to vegetation and habitat as compared to the Proposed Project. The vegetation impacts of the Iowa Street 66 kV Underground Alternative would be somewhat less than those of the Proposed Project because the 66 kV line would be buried in the road rather than strung on poles along the side of the road. No native vegetation clearing is anticipated, and no additional mitigation would be required beyond the measures set forth in Section D.4.3.3.

***Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds***

Under this alternative, placing subtransmission line underground within or adjacent to a paved street instead of on overhead poles would decrease the indirect degradation of surrounding vegetation in this location as compared to the Proposed Project. However, the more extensive ground disturbance would create additional dust impacts. With the exception of dust, as described below, the impacts of the Iowa Street 66 kV Underground Alternative would be similar to the Proposed Project as analyzed in Section D.4.3.3.

**Dust.** Trenching and underground construction would involve more extensive ground disturbance and create additional construction-related dust than the Proposed Project. Mitigation Measures AQ-1a (Control fugitive dust), AQ-1b (Control off-road equipment emissions), WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and VEG-1d (Restore or revegetate temporary disturbance areas) would minimize generated dust and any indirect effects to nearby vegetation and habitat. In this case, restoration of the underground work area would entail returning it to pre-disturbance condition, such as paving or landscaping. With implementation of these mitigation measures, the additional dust impacts associated with the Iowa Street 66 kV Underground Alternative, as compared to the Proposed Project, would be minimized.

**Sand transport.** The portion of the ROW affected by this alternative is not within sand source or sand transport areas as mapped in the CV-MSHCP.

**Surface water flow.** Construction within or adjacent to the roadway would not result in impacts to surface water flow.

**Invasive weeds.** If vegetation clearing is required adjacent to the road, implementation of Mitigation Measure VEG-2a (Prepare and implement an Integrated Weed Management Plan) may be required to ensure that invasive weeds would not occur in the adjacent areas.

***Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality***

The construction of this underground subtransmission segment would not affect jurisdictional drainages. No mitigation measures for jurisdictional waters or wetlands would be required.

***Impact VEG-4: Construction, operations, and maintenance activities could cause direct or indirect loss of listed and special-status plants and direct or indirect effects to habitat for listed and special-status plants***

Construction of the underground alternative could indirectly affect special-status plants, should they be located immediately adjacent to the underground route segment. SCE would conduct pre-construction surveys for special-status plants and mitigate the impact through avoidance, protection in place, salvage and relocation, or salvage and replacement. If surveys define nearby special-status plants, the mitigation measures for the Proposed Project would be required and would reduce project impacts to special-status plants: VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement Worker Environmental Awareness Program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), and VEG-2a (Prepare and implement an Integrated Weed Management Plan).

***Impact VEG-5: Construction, operations, and maintenance activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, state, or federal conservation plans***

**Tree Removal.** The Iowa Street 66 kV Underground Alternative is not expected to result in tree removal, as the 66 kV line would be located underground, principally within or adjacent to the street. If landscape trees along Iowa Street would be removed to build this alternative, then Mitigation Measure VEG 5a (Comply with local tree removal or resource protection policies) would require compliance with applicable local ordinances, such as the City of Redlands Street Tree Protection Policy (City of Redlands, 2013).

**Western Riverside MSHCP and Coachella Valley MSHCP.** The underground segment is in the City of Redlands in San Bernardino County and is not within the planning areas for the WR-MSHCP or CV-MSHCP.

#### **D.4.4.3 Phased Build Alternative**

The Phased Build Alternative would retain existing double-circuit 220 kV transmission structures to the extent feasible, remove single-circuit structures, add new double-circuit 220 kV structures, and string all structures with higher-capacity conductors.

By retaining and reconductoring the existing double-circuit towers, less ground disturbance would be required under the Phased Build Alternative compared to the Proposed Project. Development of new pads and new access roads that would be required for replacing the existing double-circuit towers with new towers would be avoided under the Phased Build Alternative. This would reduce impacts to both vegetation and habitat. While up to an estimated 30 percent of the existing towers may require replacement or strengthening and extending vertically, this work would be conducted at already disturbed sites. For the second line double-circuit line, where the two existing single-circuit structures would be replaced by one set of new double-circuit structures, both the Proposed Project and the Phased Build Alternative would result in similar levels of disturbance during the removal of existing structures and construction of new structures. Impacts for this line of new towers would be the same under both the Proposed Project and the alternative.

Five impacts on vegetation and habitat were identified under the Proposed Project. These impacts also would apply to the Phased Build Alternative, which would be located in the same corridor as the Proposed Project and would involve similar although less intense construction activities. The full text of all mitigation measures referenced in this section is presented in Section D.2.3.3.

***Impact VEG-1: Land clearing for construction and future operations and maintenance would cause loss or degradation of vegetation and habitat, including sensitive habitats***

Road construction and improvements, and site preparation for transmission structure demolition or construction, pull sites, staging areas, equipment yards, parking areas, administrative functions, and other project activities would necessitate removing existing vegetation and habitat. This impact would be relatively minor for vegetation and habitat removal in areas with little native habitat value (e.g., areas in industrial or agricultural use, or heavily disturbed and ruderal areas). In other areas, loss of native vegetation would reduce or degrade habitat availability for native plants and wildlife, including special-status species. In some cases, sensitive habitats or vegetation types, or habitats that support listed threatened or endangered species or other special-status species, would be removed. Even grasslands and forb lands that are predominantly covered by non-native grasses and herbs are important foraging habitat for raptors and other predators, and may support special-status or listed threatened or endangered species,

such as Stephens' kangaroo rat. Adverse effects to vegetation and habitat would occur primarily during project construction.

Under the Phased Build Alternative, strengthening and increasing the height of some of the retained double-circuit set of towers would require limited land clearing around these existing towers, resulting in loss or degradation of vegetation and habitat. This would be less than would occur under the Proposed Project, which would deconstruct these towers and replace them with new towers. Under the Proposed Project, many of the new towers would be at new locations, different from the existing towers. Under the Phased Build Alternative these new tower sites would not be required, thereby avoiding this additional disturbance.

For the set of new double-circuit towers that would replace the single-circuit structures, the impacts of the Phased Build Alternative would be similar to the Proposed Project as analyzed in Section D.4.3.3.

Construction, post-construction restoration, and O&M activities for the Phased Build Alternative would necessitate temporary and permanent removal of vegetation and habitat. The adverse effect on vegetation and habitat due to land clearing under this alternative would be less than under the Proposed Project. Impacts to vegetation and habitat would be reduced through implementation of Mitigation Measures VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement worker environmental awareness program [WEAP]), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), and VEG-1e (Compensate for permanent habitat loss).

***Impact VEG-2: Project activities could cause indirect degradation of surrounding vegetation and habitat from dust, interrupted sand transport, interruption of surface water flows, or introduction and spread of invasive weeds***

Construction, restoration, and O&M activities could have several indirect impacts to surrounding vegetation and habitat. These impacts may include dust caused by project activities or vegetation removal, interruption of windblown sand transport to downwind habitat, interruption of surface flows and water or sediment supply to downstream habitat, and the introduction or spread of invasive species. The extent and severity of these indirect habitat effects would depend on the sensitivity of adjacent habitat and the plants or wildlife it supports. O&M activities associated with the Proposed Project are expected to be less than or equivalent to O&M of the existing West of Devers system and impacts would be similar to or reduced from existing conditions.

Under the Phased Build Alternative, because there would be less construction disturbance overall, there would be less indirect degradation of surrounding vegetation and habitat due to dust, interrupted sand transport, interrupted surface water flows, or introduction and spread of weeds.

**Dust.** Disturbed soils would be exposed for much of the construction and restoration phases, leading to increased wind erosion and dust generation compared to existing conditions. However, because disturbance during demolition of existing double-circuit towers would not occur and replacement towers would not be required, avoiding this ground-disturbing action, less disturbed soil would be exposed, as compared to the Proposed Project. Mitigation Measures AQ-1a (Control fugitive dust), AQ-1b (Control off-road equipment emissions), WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), and VEG-1d (Restore or revegetate temporary disturbance areas) would minimize generated dust and its indirect effects to vegetation and habitat. With implementation of these mitigation measures, the additional dust impacts associated with the Phased Build Alternative would be minimized and would be less than with the Proposed Project.

**Sand transport.** The sand transport area on the project ROW is immediately east of Whitewater River and Wash. Under the Phased Build Alternative there would be less disturbance in this area and, therefore, less potential impacts to sand transport as compared to the Proposed Project.

**Surface water flow.** With implementation of APM HYDRO-1 (see Table B-18) and Mitigation Measures WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), VEG-1a (Conduct biological monitoring and reporting), VEG-1d (Restore or revegetate temporary disturbance areas), and VEG-1e (Compensate for permanent habitat loss), the impacts of the Phased Build Alternative on surface hydrology would be minimized, and would be less than the Proposed Project.

**Invasive weeds.** Less soil area would be disturbed under the Phased Build Alternative compared to the Proposed Project. With implementation of VEG-2a (Prepare and implement an Integrated Weed Management Plan), the additional invasive weed impacts associated with the Phased Build Alternative would be minimized, and would be less than the Proposed Project.

***Impact VEG-3: Construction, operations, and maintenance activities would affect state or federally jurisdictional waters and wetlands through vegetation removal, placement of fill, erosion, sedimentation, or degradation of water quality***

The alternative would affect jurisdictional waters of the State or waters of the U.S. During construction, these impacts would include placing fill material into jurisdictional waters to provide level, dry work areas, tower pads, or roadways; constructing roadways, culverts, or other crossing structures across jurisdictional channels; installing channel armoring (such as riprap) in a channel near a work site to prevent flooding or erosion; constructing impoundments or detention basins on jurisdictional channels; or grading or other site preparation that eliminates or redirects natural runoff. Construction impacts to jurisdictional waters, including intermittent channels, could also affect downstream wetlands, riparian, or aquatic habitat and the biological resources found in those downstream habitats.

All project impacts, including those of the Phased Build Alternative, to waters of the State or waters of the U.S. (including construction, restoration, and O&M phases) would be subject to permitting under the California Fish and Game Code and federal Clean Water Act (CWA). Potential impacts to jurisdictional drainages would be reduced through implementation of a Storm Water Pollution Prevention Plan (SWPPP) including Best Management Practices (BMPs) as described in Section 4.9 of the PEA (see page 4.9-21), and compliance with the conditions set forth in State and federal permits or authorizations (California Fish & Game Code Sections 1600-1616 and CWA Sections 401 and 404). In addition, Mitigation Measures WR-2a (Implement an Erosion Control Plan and demonstrate compliance with water quality permits), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), and VEG-3a (Minimize impacts and ensure no net loss for jurisdictional waters and wetlands) would further minimize or mitigate the effects of surface hydrology alterations. With implementation of permit conditions and mitigation measures, the adverse impacts of the Phased Build Alternative on biological resources within jurisdictional waters would be avoided or mitigated. Because there would be less ground disturbance, the impact would be less under this alternative than under the Proposed Project.

***Impact VEG-4: Construction, operations, and maintenance activities could cause direct or indirect loss of listed and special-status plants and direct or indirect effects to habitat for listed and special-status plants***

There were no listed threatened or endangered plants located within the Proposed Project study area during field surveys reported in the PEA. One listed species, Coachella Valley milk-vetch (federally listed endangered) could occur in parts of Segment 6, where suitable habitat is present. Its habitat is primarily



windblown sand, but also includes fine-grained, loose alluvial sand. In addition, the Proposed Project route crosses designated critical habitat for Coachella Valley milk-vetch in the Whitewater River wash. Coachella Valley milk-vetch is an annual or short-lived perennial that may not germinate or flower in some years, especially years of low rainfall. Thus, while it was not found during field surveys, it may be present in some parts of the ROW in future years, possibly during project construction. No other listed species is likely to occur on the route, based on field surveys and the habitats, geographic ranges, and elevational distributions of other listed species. No other designated critical habitat for plant species is located on the route.

Should special-status plants occur on or near the project ROW, they could be directly affected by both the Proposed Project and the Phased Build Alternative. SCE would conduct pre-construction surveys for special-status plants and mitigate the impact through avoidance, protection in place, salvage and relocation, or salvage and replacement. The Biological Opinion and, if required, the Incidental Take Permit or Consistency Determination may include additional measures to protect special-status plants.

In addition, the following mitigation measures would help to reduce or offset project impacts to special-status plants: VEG-1a (Conduct biological monitoring and reporting), VEG-1b (Prepare and implement Worker Environmental Awareness Program), VEG-1c (Minimize native vegetation and habitat loss), VEG-1d (Restore or revegetate temporary disturbance areas), VEG-1e (Compensate for permanent habitat loss), and VEG-2a (Prepare and implement an Integrated Weed Management Plan). Mitigation Measure VEG-4a (Minimize and mitigate impacts to special-status plants) details follow-up mitigation that may be necessary, should the project affect special-status plants. With implementation of permit conditions and mitigation measures, the impacts of the Phased Build Alternative on special-status plants would be minimized or mitigated. Because there would be less disturbance and less construction as a result of retaining the existing double-circuit towers, there would be fewer impacts than would occur under the Proposed Project.

***Impact VEG-5: Construction, operations, and maintenance activities may conflict with local policies or ordinances protecting biological resources, Habitat Conservation Plans, Natural Communities Conservation Plans, Multiple Species Habitat Conservation Plans, or other approved local, regional, state, or federal conservation plans***

**Tree Removal.** Local jurisdictions along the project route have tree protection or preservation policies or ordinances, and the BLM requires authorization for removal of cactus or yucca plants from BLM lands. With less land disturbance, it is expected that fewer tree removals would be required. Mitigation Measure VEG-5a (Comply with local tree removal or resource protection policies) would require SCE to obtain permits from local jurisdictions and BLM for tree removal or other plant removal or harvest, in accordance with each applicable ordinance or policy. With implementation of this mitigation measure, the impacts of the Phased Build Alternative would be the same as the Proposed Project.

**Western Riverside MSHCP and Coachella Valley MSHCP.** Towers would be located within the WR-MSHCP planning area and the CV-MSHCP planning area. Mitigation Measure VEG-5b requires SCE to ensure MSHCP equivalency and consistency. The requirements for the Phased Build Alternative regarding the MSHCPs would be the same as detailed in Section D.4.3.3. However, with less disturbance and construction, impacts would be less than under the Proposed Project.

## D.4.5 Environmental Impacts of No Action Alternative

### D.4.5.1 No Action Alternative Option 1

The No Action Alternative Option 1 is described in Section C.6.3.1. It would consist of a new 500 kV circuit, primarily following the Devers-Valley transmission corridor and extending 26 miles between Devers Substation. It would also require a new 40-acre substation south of Beaumont, and 4 new 220 kV circuits extending 7 miles from the new Beaumont Substation to El Casco Substation, primarily following the existing El Casco 115 kV ROW. The remainder of the No Action Alternative, from El Casco Substation to the San Bernardino and Vista Substations, would be identical to the Proposed Project. Information on environmental resources and project impacts are derived for the Devers–Palo Verde 500 kV No. 2 Project EIR/EIS (CPUC and BLM, 2006) and the El Casco System Project Draft EIR (CPUC, 2007); which include nearly all of the No Action alignment.

From Devers Substation to west of Cabazon, the land is within the Coachella Valley MSHCP. At that point, the alignment to Beaumont Substation and west to El Casco Substation is within the Western Riverside MSHCP. The alignment segment crosses both BLM and USFS lands, subject to the requirements of those management agencies.

**Devers to Beaumont Substation.** One listed plant species, Coachella Valley milk-vetch, is known to occur in the ROW near Devers Substation and could potentially occur along the alternative route between the substation and the San Jacinto Mountains foothills. Five listed plants species, including Munz’s onion, San Diego ambrosia, San Jacinto Valley crownscale, Nevin’s barberry, and Mojave tarplant, have a high to moderate potential to occur along the route of this alternative because suitable habitat is present and/or this species has been recorded in the vicinity of the ROW. In addition, numerous sensitive plants have a moderate to high potential to occur along the ROW between Devers and Beaumont Substations.

The disturbance and/or loss of native vegetation communities resulting from the construction of the No Action Alternative would require mitigation. Examples include conducting surveys for listed plant species, preparation and implementation of a Habitat Restoration/Compensation Plan, and implementation of control measures for invasive and noxious weeds. The Devers to Beaumont Substation alignment would follow the existing Devers to Valley alignment. In the analysis of the Devers to Valley alignment in the DPV2 EIR/EIS, all impacts to vegetation were less than significant or less than significant with mitigation.

**Beaumont Substation.** The substation site is grassland in a gently rolling topography and has been subject to agricultural practices. The site is approximately 1 mile north of the northern boundary of the Potrero ACEC, an area managed for conservation of multiple species and their habitats. Plant species similar to those along 500 kV alignment on the west side of the San Jacinto to Mountains may occur. As with the 500 kV transmission alignment mitigation for temporary and permanent impacts to vegetation would include surveys for listed plant species, implement a Habitat Restoration/Compensation Plan, and implementation of control measures for invasive and noxious weeds.

**Beaumont to El Casco Substation.** For approximately 1.5 miles, the 220 kV alignment north of the substation primarily traverses grasslands and disturbed or developed land before paralleling San Timoteo Creek for approximately 1.7 miles. The riparian corridor along the creek is dominated by mature cottonwood and willow trees. The route then parallels Highway 60 to the south, crosses the highway, and continues to El Casco Substation. This area is characterized by rolling foothills dominated by non-native annual grasslands and disturbed/ruderal habitat in the valleys, transitioning to chamise chaparral and southern mixed chaparral at higher elevations. Construction activities could disturb or eliminate vegeta-

tion. As with the transmission alignment between Devers and Beaumont, mitigation would include surveys for listed plant species, implement a Habitat Restoration/Compensation Plan, and implementation of control measures for invasive and noxious weeds.

#### D.4.5.2 No Action Alternative Option 2

No Action Alternative Option 2 would require the construction of over 40 miles of new 500 kV transmission line, following the existing Valley-Serrano 500 kV line. The alternative is described in Section C.6.3.2, and illustrated on Figure C-6b. The eastern portion of the corridor is located within the Western Riverside County MSHCP. The western portion of the route is located in the Central/Coastal Orange County and Orange County Transportation Authority Natural Community Conservation Planning (NCCP)/Habitat Conservation Plan (HCP) areas.

West of the Perris Valley, the route traverses natural land which is mostly coastal sage scrub with small stretches of chaparral or grassland-scrub transition. A narrow zone of riparian habitat is located along Temescal Wash, near MP 20.4. The dominant vegetation types within the western portion of the route are coastal sage scrub and chaparral with isolated zones of coniferous forest of various types at high elevations within the Cleveland National Forest. The California Natural Diversity Database (CNDDB) search documented 15 special-status plant species that are known to occur in or near the existing corridor. Examples of these species are Munz's onion (*Allium munzii*; federally listed endangered, state-listed threatened, California Rare Plant Rank (CRPR) 1B.1), thread-leaved brodiaea (*Brodiaea filifolia*; federally listed threatened, state-listed endangered, CRPR 1B.1), San Diego ambrosia (*Ambrosia pumila*; federally-listed endangered, CRPR 1B.1), Parry's spineflower (*Chorizanthe parryi* var. *parryi*; CRPR 1B.1), round-leaved filaree (*California macrophylla*; CRPR 1B.1), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*; CRPR 1B.2), and many-stemmed dudleya (*Dudleya multicaulis*; CRPR 1B.2).

The disturbance and/or loss of native vegetation communities resulting from the construction of the No Action Alternative Option 2 would require mitigation. Typical mitigation includes conducting surveys for listed plant species to ensure avoidance, preparation and implementation of a Habitat Restoration/Compensation Plan, and implementation of control measures for invasive and noxious weeds.

#### D.4.6 Mitigation Monitoring, Compliance, and Reporting

Table D.4-7 presents the mitigation monitoring, compliance, and reporting plan for biological resources – vegetation. Due to the length of the mitigation measure text for biological resources, ***the full text for each measure is not presented in this table, but is provided in Section D.4.3.3 above.***

**Table D.4-7. Mitigation Monitoring Program – Biological Resources – Vegetation**

|                                      |  |
|--------------------------------------|--|
| <b>MITIGATION MEASURE</b>            | <b>VEG-1a: Conduct biological monitoring and reporting (<i>see full text in Section D.4.3.3</i>)</b>   |
| <b>Location</b>                      | All segments.  |
| <b>Monitoring / Reporting Action</b> | <p>SCE submits lead biologist's and biological monitors' resumes; CPUC/BLM monitor verifies lead biologist's and biological monitors' qualifications. SCE monitors pre-construction, construction, and post-construction restoration work activities where there is a potential to impact sensitive biological resources or jurisdictional waters. SCE conducts daily clearance sweeps of construction work areas. SCE inspects sensitive biological resource areas. SCE conducts daily inspections of excavations and wildlife entrapment hazards and exclusion fencing. SCE provides accurate daily work schedule and up-to-date biological resource and construction maps and GIS data to CPUC/BLM monitor.</p> <p>SCE documents monitoring activities daily, including special-status species observations and non-compliance incidents. SCE provides weekly updates, including bird nesting activities and buffer distances and copies of CNDDB records. SCE submits compliance monitoring summaries annually. CPUC/BLM monitor approves proposed report formats in consultation with CDFW and USFWS.</p> <p>SCE submits a final compliance monitoring report after completion of construction; CPUC/BLM monitor approves report format and contents in consultation with CDFW and USFWS.</p> |
| <b>Effectiveness Criteria</b>        | Effective monitoring; pre-construction, construction, and post-construction activities maintained in compliance with mitigation measures, permit conditions, and other environmental requirements; accurate documentation and timely reporting.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.   |
| <b>Timing</b>                        | No less than 60 days prior to the start of any ground-disturbing activities; pre-construction, construction, and post-construction restoration phases.   |
| <b>MITIGATION MEASURE</b>            | <b>VEG-1b: Prepare and implement a Worker Environmental Awareness Program (WEAP) (<i>see full text in Section D.4.3.3</i>).</b>  |
| <b>Location</b>                      | All segments.  |
| <b>Monitoring / Reporting Action</b> | SCE submits WEAP training presentation and materials; CPUC/BLM monitor approves training presentation and materials in consultation with CDFW and USFWS. SCE maintains documentation of personnel that have completed WEAP training and submits documentation to CPUC/BLM monitor upon request; project personnel wear hardhat stickers in the field. SCE documents WEAP refresher presentations in monitor's daily reports.   |
| <b>Effectiveness Criteria</b>        | All on-site personnel aware of environmental compliance requirements.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.   |
| <b>Timing</b>                        | No less than 60 days prior to the start of any ground-disturbing activities; during construction.  |
| <b>MITIGATION MEASURE</b>            | <b>VEG-1c: Minimize native vegetation and habitat loss (<i>see full text in Section D.4.3.3</i>)</b>   |
| <b>Location</b>                      | All segments.  |
| <b>Monitoring / Reporting Action</b> | SCE submits final engineering GIS shapefiles to CPUC/BLM with data on temporary and permanent disturbance for each vegetation/habitat type. On completion of construction, SCE submits final as-built GIS shapefiles to CPUC/BLM with actual temporary and permanent disturbance for each vegetation/habitat type. SCE stakes disturbance areas in the field; CPUC/BLM monitor verifies staking.   |
| <b>Effectiveness Criteria</b>        | Accurate temporary and permanent disturbance data for calculation of mitigation requirements.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.   |
| <b>Timing</b>                        | Prior to, during, and after construction.  |
| <b>MITIGATION MEASURE</b>            | <b>VEG-1d: Restore or revegetate temporary disturbance areas (<i>see full text in Section D.4.3.3</i>)</b>   |
| <b>Location</b>                      | All segments.  |

**Table D.4-7. Mitigation Monitoring Program – Biological Resources – Vegetation**

|                                      |   |
|--------------------------------------|---|
| <b>Monitoring / Reporting Action</b> | SCE submits Habitat Restoration and Revegetation Plan and annual monitoring reports; CPUC/BLM monitor approves plan and report format and content in consultation with CDFW and USFWS.  |
| <b>Effectiveness Criteria</b>        | Restoration/revegetation of all temporary disturbance areas, including sensitive vegetation and special-status species habitat.   |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.  |
| <b>Timing</b>                        | Within 12 months from the start of construction; restoration phase; for at least 5 years post-construction.   |
| <b>MITIGATION MEASURE</b>            | <b>VEG-1e: Compensate for permanent habitat loss (<i>see full text in Section D.4.3.3</i>)</b>  |
| <b>Location</b>                      | All segments.   |
| <b>Monitoring / Reporting Action</b> | SCE submits a Habitat Compensation Plan and a Management Plan; CPUC/BLM monitor approves plans in consultation with CDFW and USFWS. SCE submits necessary documents and reports pursuant to participation in a mitigation bank, or acquisition of fee title or conservation easement, and establishment of long-term maintenance and management funding; CPUC/BLM monitor approves documents and reports in consultation with CDFW and USFWS and other agencies, as required. |
| <b>Effectiveness Criteria</b>        | Compensation for permanent habitat loss through participation in WR-MSHCP, CV-MSHCP, or off-site habitat acquisition and management.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.  |
| <b>Timing</b>                        | Post-construction.  |
| <b>MITIGATION MEASURE</b>            | <b>VEG-2a: Prepare and implement an Integrated Weed Management Plan (<i>see full text in Section D.4.3.3</i>)</b>   |
| <b>Location</b>                      | All segments.   |
| <b>Monitoring / Reporting Action</b> | SCE submits Integrated Weed Management Plan; CPUC/BLM monitoring approves plan in consultation with CDFW and USFWS. SCE conducts weed inventory/mapping and monitoring. SCE documents construction vehicle and equipment washing and submits documentation to CPUC/BLM monitor upon request. SCE submits monitoring reports to CPUC/BLM monitor as specified in Integrated Weed Management Plan.  |
| <b>Effectiveness Criteria</b>        | Minimize introduction and spread of invasive plants.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.  |
| <b>Timing</b>                        | At least 60 days prior to SCE's application for Notice to Proceed; pre-construction, construction, and post-construction restoration phases.  |
| <b>MITIGATION MEASURE</b>            | <b>VEG-3a: Minimize impacts and ensure no net loss for jurisdictional waters and wetlands (<i>see full text in Section D.4.3.3</i>)</b>   |
| <b>Location</b>                      | All segments.   |
| <b>Monitoring / Reporting Action</b> | SCE submits a Habitat Mitigation and Monitoring Plan for affected jurisdictional areas; USACE, CDFW, SWRCB, EPA, and CPUC/BLM approve plan.   |
| <b>Effectiveness Criteria</b>        | Minimize impacts to jurisdictional waters and wetlands and mitigate for unavoidable impacts through ecological restoration of temporarily disturbed areas and compensation for permanently disturbed areas.   |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS, USACE, CDFW, SWRCB, EPA.   |
| <b>Timing</b>                        | Prior to, during, and after construction.   |
| <b>MITIGATION MEASURE</b>            | <b>VEG-4a: Minimize and mitigate impacts to special-status plants (<i>see full text in Section D.4.3.3</i>)</b>   |
| <b>Location</b>                      | All segments.   |

**Table D.4-7. Mitigation Monitoring Program – Biological Resources – Vegetation**

|                                      |  |
|--------------------------------------|--|
| <b>Monitoring / Reporting Action</b> | SCE submits results of pre-construction focused surveys and maps; CPUC/BLM monitor approves report format and content in consultation with CDFW and USFWS. SCE notifies BLM, USFWS, and CDFW if federally or state-listed plants will be affected by project. SCE conducts site-specific monitoring, as needed, with approval of CPUC/BLM in consultation with CDFW and USFWS. SCE submits a Special-status Plant Salvage and Relocation Plan, if needed, and annual monitoring reports; CPUC/BLM monitor approves plan and reports in consultation with CDFW and USFWS. |
| <b>Effectiveness Criteria</b>        | Minimize and compensate for impacts to special-status plants.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.   |
| <b>Timing</b>                        | Pre-construction, construction, post-construction phases.  |
| <b>MITIGATION MEASURE</b>            | <b>VEG-5a: Comply with local tree removal or resource protection policies (<i>see full text in Section D.4.3.3</i>)</b>  |
| <b>Location</b>                      | All segments.  |
| <b>Monitoring / Reporting Action</b> | SCE obtains permits from local jurisdictions, as needed.   |
| <b>Effectiveness Criteria</b>        | Compliance with local tree ordinances and policies.  |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.   |
| <b>Timing</b>                        | During construction.   |
| <b>MITIGATION MEASURE</b>            | <b>VEG-5b: Ensure MSHCP equivalency and consistency (<i>see full text in Section D.4.3.3</i>)</b>  |
| <b>Location</b>                      | WR-MSHCP and CV-MSHCP.   |
| <b>Monitoring / Reporting Action</b> | If SCE does not obtain PSE status, SCE prepares a consistency analysis report; CPUC/BLM approves report in consultation with CDFW, USFWS, Riverside County Regional Conservation Authority, and CVCC.  |
| <b>Effectiveness Criteria</b>        | Consistency with MSHCP requirements.   |
| <b>Responsible Agency</b>            | CPUC; BLM Palm Springs–South Coast Field Office in coordination with CDFW and USFWS.   |
| <b>Timing</b>                        | Prior to any ground-disturbing activity.   |

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